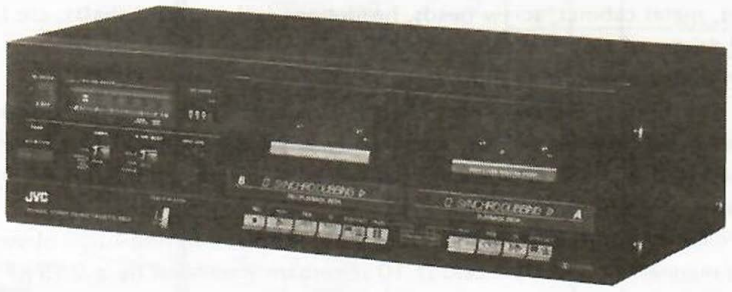
JVC

W2106 Millard TV

SERVICE MANUAL

STEREO DOUBLE CASSETTE DECK

TD-W103 A/B/C/E/G/J/U



Area suffix	
A	Australia
B	U.K.
C	Canada
E	Continental Europe
G	West Germany
J	U.S.A.
U	Other Areas

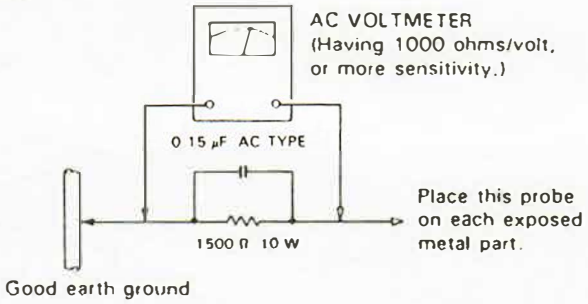
Contents

Page

1 Safety Precautions 2
2 Safety Precautions about TD-W83J 3
3 Features 4
4 Specifications 4
5 Instruction Book (Extract) 5
6 Location of Main Parts 9
7 Removal of Main Parts 11
8 Main Adjustments 15
9 Block Diagram 19
10 Standard Schematic Diagram 20
11 Wiring Connections 21
12 Location of P.C. Board Parts and Parts List 22
13 Exploded View of Mechanism Component Parts and Parts List 26
14 Exploded View of Enclosure Component Parts and Parts List 28
15 Packing Illustration and Parts List 31
16 Accessories . . . . . Back Cover

1 Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by (⚠) on the Schematic Diagram and Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

2 Safety Precautions about TD-W103

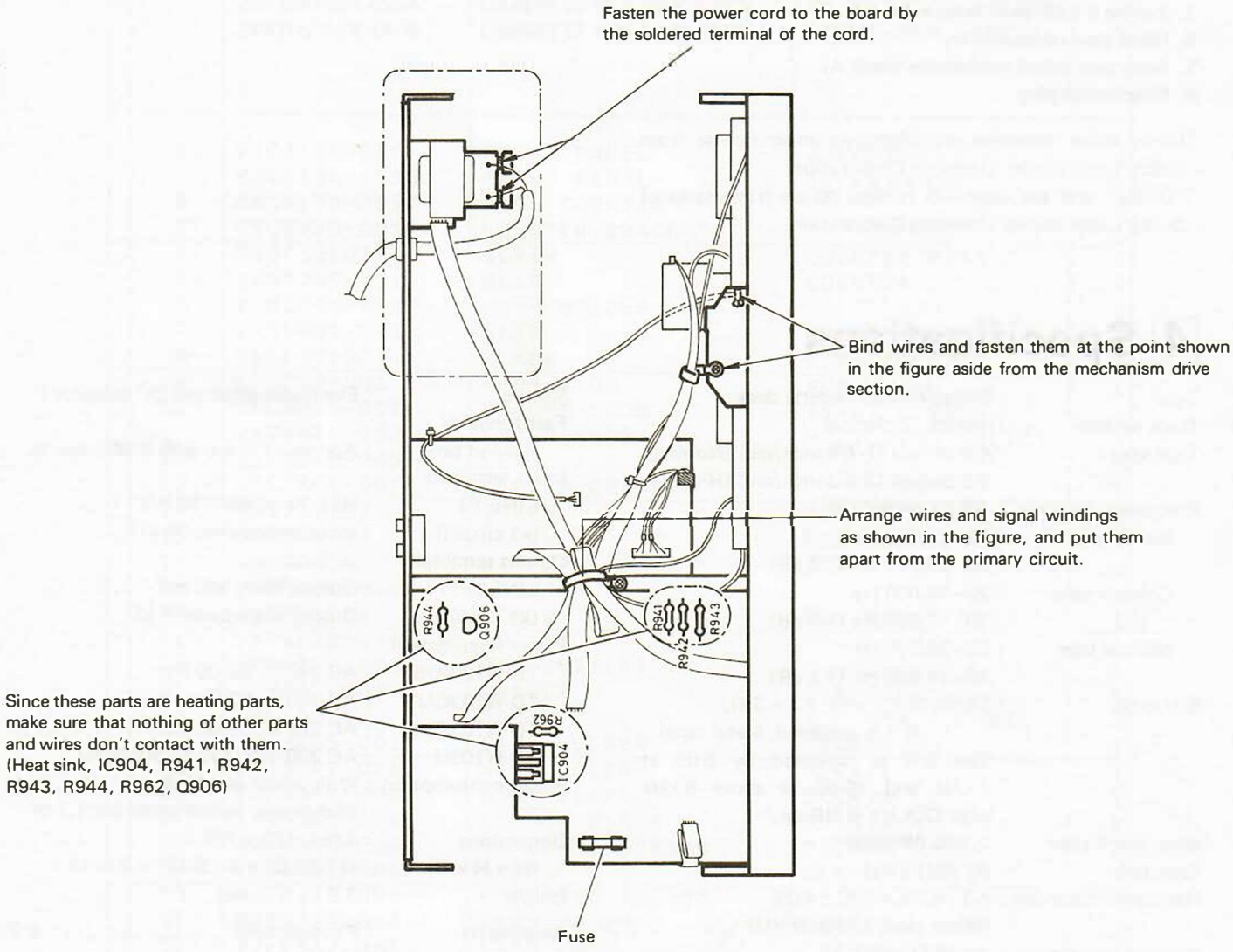

Fasten the power cord to the board by the soldered terminal of the cord.
Bind wires and fasten them at the point shown in the figure aside from the mechanism drive section.
Arrange wires and signal windings as shown in the figure, and put them apart from the primary circuit.
Since these parts are heating parts, make sure that nothing of other parts and wires don't contact with them. (Heat sink, IC904, R941, R942, R943, R944, R962, Q906)
R944
Q906
R941
R942
R943
R962
IC904
Fuse

Fig. 2-1

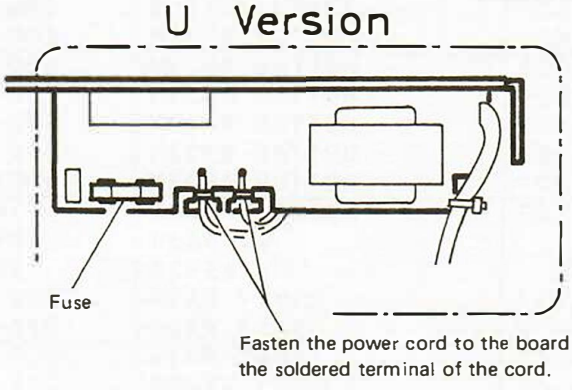


Fig. 2-2

3 Features

1. **Synchro start dubbing (normal-/high-speed)**
2. **Dolby* B noise reduction system**
3. **2-color 6-LED peak level indicator**
4. **Metal tape compatibility**
5. **Auto tape select mechanism (deck A)**
6. **Continuous play**

*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

*"Dolby" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

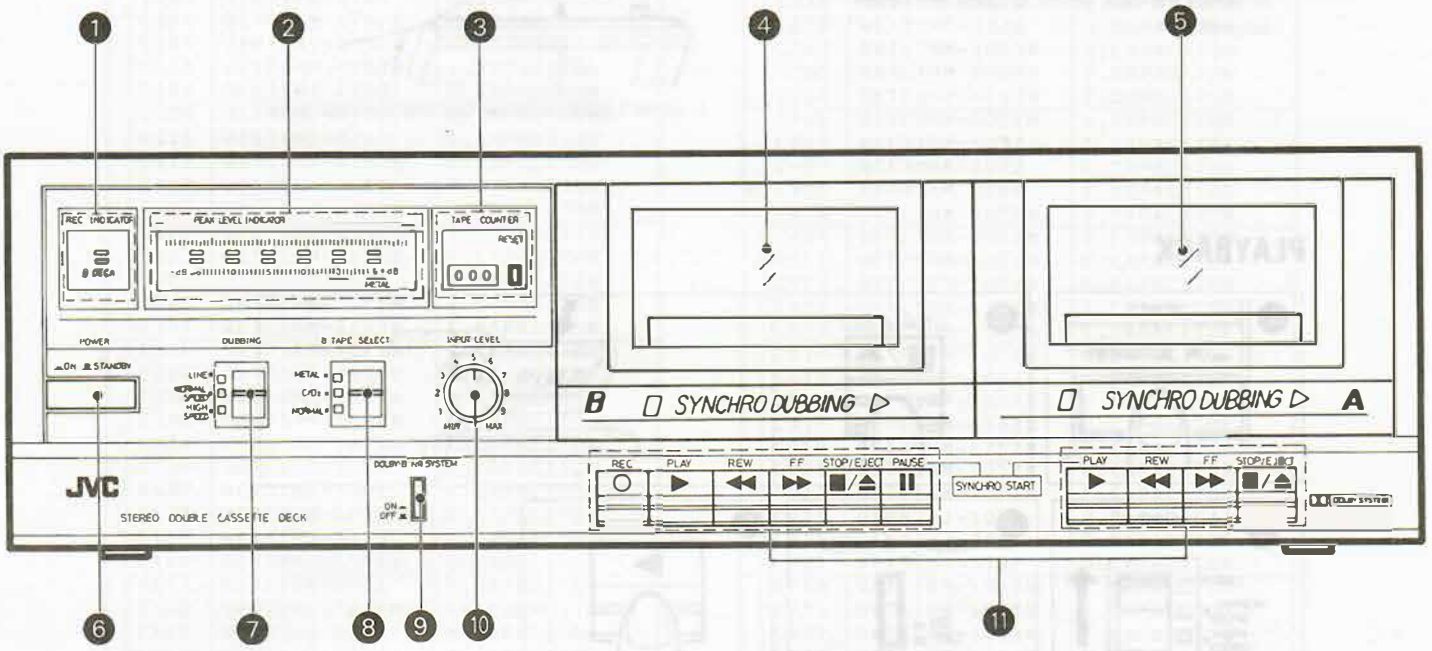
4 Specifications

Type	: Stereo double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 4.8 cm/sec (1-7/8 inch/sec) (Normal) 9.5 cm/sec (3-3/3 inch/sec) (High)
Frequency response (−20 dB recording)	
Metal tape	: 20–16,000 Hz 30–15,000 Hz (±3 dB)
Chrome tape	: 20–16,000 Hz 30–15,000 Hz (±3 dB)
Normal tape	: 20–15,000 Hz 30–14,000 Hz (±3 dB)
S/N ratio	: 58 dB (S = 1 kHz, K3 = 3%), N = A weighted, Metal tape) The S/N is improved by 5 dB at 1 kHz and 10 dB at above 5 kHz with DOLBY B NR on.
Wow and flutter	: 0.10% (WRMS)
Crosstalk	: 60 dB(1 kHz)
Harmonic distortion	: K3 ; 0.5%, THD ; 1.0% (Metal tape, 1 kHz, 0 VU)
Channel separation	: 40 dB (1 kHz)
Heads	: Deck A; METAPERM head for playback Deck B; METAPERM head for recording/playback, 2-gap ferrite head for erasure
Motors	: Electronic governed DC motor x 1
Fast forward/ Rewind time	: Approx. 115 sec with C-60 cassette
Input terminals	
LINE IN (x1 circuit)	: Min. input level; 80 mV Input impedance; 50 kΩ
Output terminals	
LINE OUT (x1 circuit)	: Output level; 300 mV Output impedance; 5 kΩ
Power requirement	
TD-W103A/B	: AC 240 V, 50/60 Hz
TD-W103C/J	: AC 120 V, 60 Hz
TD-W103E/G	: AC 220 V, 50/60 Hz
TD-W103U	: AC 230/127/110 V, 50/60 Hz
Power consumption	: With power on; 10 W With power switch stand-by; 1.3 W
Dimensions (W x H x D)	: 435 x 125 x 235 mm (17-3/16" x 4-15/16" x 9-5/16")
Weight	: 3.5 kg (7.8 lbs)
Accessories	: Pin plug cord . . . . . x 2

Design and specifications are subject to change without notice.

5 Instruction Book(Extract)

NAMES OF PARTS AND THEIR FUNCTIONS



❶ **REC INDICATOR**

❷ **PEAK LEVEL INDICATOR**
These indicate the recording level during recording and output level during playback. the LED indication varies with the signal strength during recording and playback.

❸ **TAPE COUNTER and RESET button (deck B)**

❹ **Cassette holder (deck B)**

❺ **Cassette holder (deck A)**

❻ **POWER switch**

❼ **DUBBING switch**
LINE : Set to this position when recording from the LINE IN input.
NORMAL SPEED: Set to this position for normal-speed dubbing.
HIGH SPEED: Set to this position for high-speed dubbing.

❽ **TAPE SELECT switch (deck B)**
Select the switch position according to the tape to be used during recording and playback. (See "TAPE SELECT switch" on page 17.)

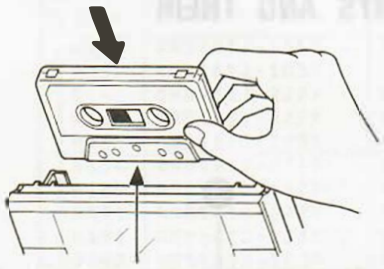
❾ **DOLBY-B NR SYSTEM switch**

❿ **INPUT LEVEL control**

⓫ **Cassette operation buttons (decks A and B)**
○ **REC button:**
Press this button with the ► PLAY button to start recording.
► **PLAY button:**
Press to play the tape.
◄◄ **REW button:**
Press to rewind the tape rapidly.
►► **FF button:**
Press this button to fast forward the tape.
■/⏏ **STOP/EJECT button:**
Press to stop the tape. Pressing this button after the tape stops opens the cassette holder. During play or record mode, the auto stop mechanism stops the tape at the end of tape. In other modes, this button must be pressed.
❚❚ **PAUSE button:**
Press to temporarily stop the tape. Press it again to release the pause mode.

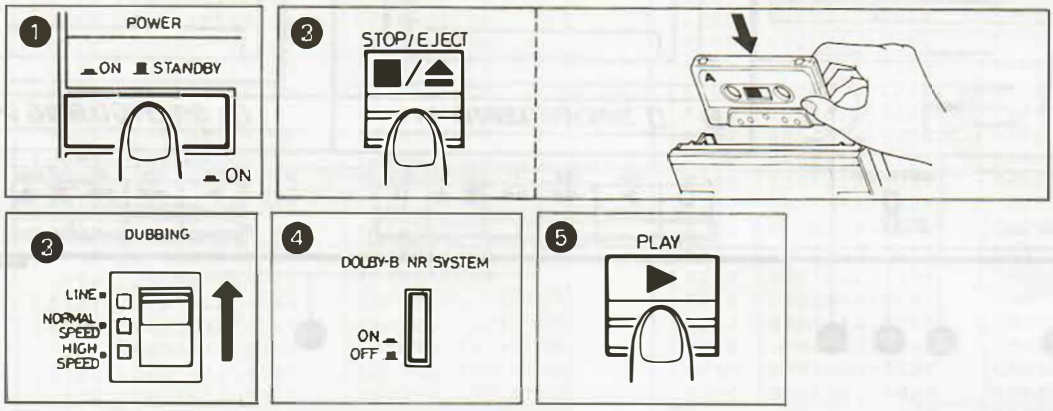
CASSETTE LOADING

1. Press the ■/⏏ STOP/EJECT button to open the cassette holder.
2. Load a cassette as shown.
3. Press the cassette holder to close it. Be sure to obtain the click sound to close the holder securely.



Load the cassette with the tape-exposed edge down

PLAYBACK



Playback of deck A
(Auto tape select mechanism)

1. Press the POWER switch to set to ON (▁).
2. Load a prerecorded cassette.
3. Set the DUBBING switch to LINE.
4. Set the NR SYSTEM switch to the same position as when the tape was recorded.
5. Press the ► PLAY button to start playback.

Playback of deck B

After setting the TAPE SELECT switch to the positions corresponding to the tape used, perform steps ❷ to ❺ of the above procedure for deck **B**.

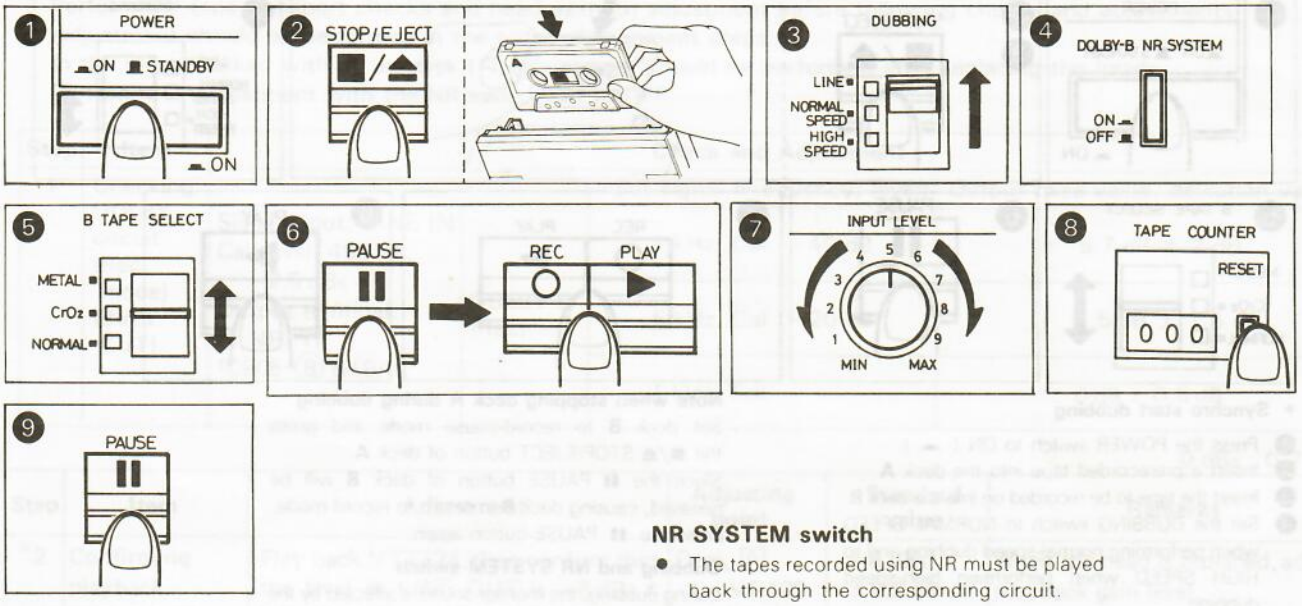
Continuous play

Load cassettes in both decks and press the ► PLAY button of deck **A**, then press the ► PLAY and ❚❚ PAUSE buttons of deck **B**. When deck **A** enters the auto stop mode, the ❚❚ PAUSE button of deck **B** is automatically released and deck **B** begins playback.

Notes:

1. Use tapes with the same noise reduction mode in decks **A** and **B**.
2. Be sure to start from deck **A** when performing the continuous play.

RECORDING



Deck B only

1. Press the POWER switch to set to on (▬).
2. Load a cassette for recording.
3. Set the DUBBING switch to LINE.
4. Set the NR SYSTEM switch as required.
5. Set the TAPE SELECT switch according to the type of tape. (See page 17.)
6. Press the ❚❚ PAUSE button then ○ REC and-► PLAY button simultaneously (record-pause mode).
7. Adjust the recording level. (See page 17.)
8. Press to "000".
9. Press again to release the pause mode and to start recording.

Do not operate deck **A** during recording. In this case, noise may occur and the tape speed may vary.

WARNING
It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.

Erasing

When recording on a prerecorded tape, the previous recording is automatically erased and only the new program is recorded on the tape.

To erase a tape without making a new recording...

In step ❹ "RECORDING", set the NR SYSTEM switch to OFF and, in step ❼, set the INPUT LEVEL control to MIN.

TAPE SELECT switch (deck B)

1. Set this switch to NORM when using normal tape (Type I), to CrO_2 when using chrome tape (Type II) and to METAL when using metal tape (Type IV).
2. The use of ferri-chrome tape for recording with this set is not recommended because recording levels are slightly different from other tape characteristics. Set to the CrO_2 position for playback.

NR SYSTEM switch

- The tapes recorded using NR must be played back through the corresponding circuit.

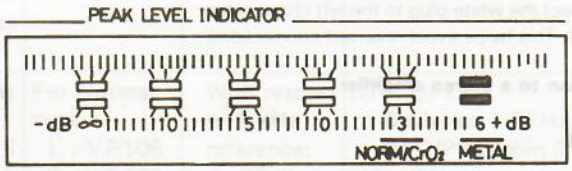
Notes:

1. Proper sound quality will not be obtained if different NR SYSTEM switch settings are used during recording and playback.
2. When recording or playing back a tape with the NR SYSTEM switch set to ON (▬), be sure to set the DUBBING switch to LINE.

Recording level adjustment

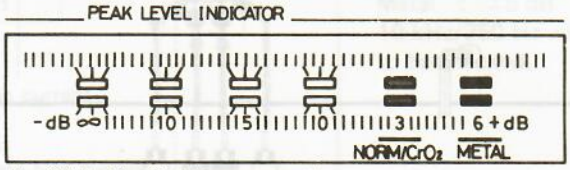
Adjust the recording level while observing the PEAK LEVEL INDICATOR indication.
For example:

With Metal tape



Because of metal tape's higher saturation level, it is OK that " + 6" lights occassionally.

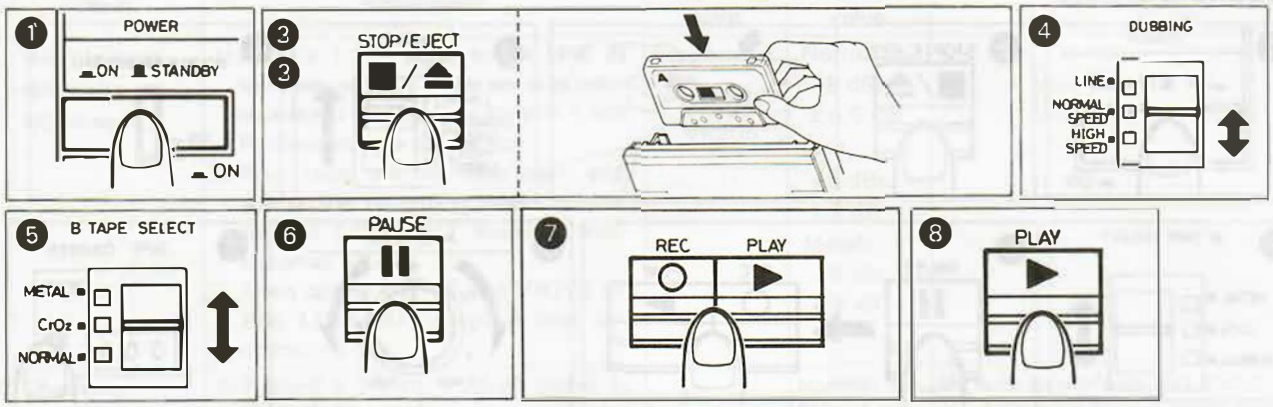
With Normal or Chrome tape



It is OK that " + 3" lights occasionally.

- If " + 6" lights too often because the recording level is too high, the recorded sound may be distorted and seem to be breaking up. If only "0" lights infrequently, the level is too low and the recording may contain tape hiss.
- It is best to adjust the recording level near the tape's saturation level. The best level varies depending on the type of music and type of tape so it is better to make test recording, using FM music, records, etc.

DUBBING



- **Synchro start dubbing**

1. Press the POWER switch to ON (⏏).
2. Insert a prerecorded tape into the deck **A**.
3. Insert the tape to be recorded on into the deck **B**.
4. Set the DUBBING switch to NORMAL SPEED when performing normal-speed dubbing and to HIGH SPEED when performing high-speed dubbing.
5. Set the TAPE SELECT switch to match the type of tape used. (Deck **B**).
6. Press the ⏸ PAUSE button.
7. Press the ○ REC and ► PLAY buttons simultaneously. (Deck **B**)
8. Press the ► PLAY button (Deck **A**). Dubbing will start.

Note when stopping deck A during dubbing

Set deck **B** to record-pause mode and press the ■/⏏ STOP/EJECT button of deck **A**.
Since the ⏸ PAUSE button of deck **B** will be released, causing deck **B** to return to record mode, press the ⏸ PAUSE button again.

Dubbing and NR SYSTEM switch

During dubbing, the monitor sound is affected by the position of the NR switch; however, the sound dubbed onto the tape is not affected by the position of the NR switch. Therefore, the copy will be an exact duplicate of the original; if the original tape is NR-encoded, the dubbed copy will also be NR-encoded.

Input level

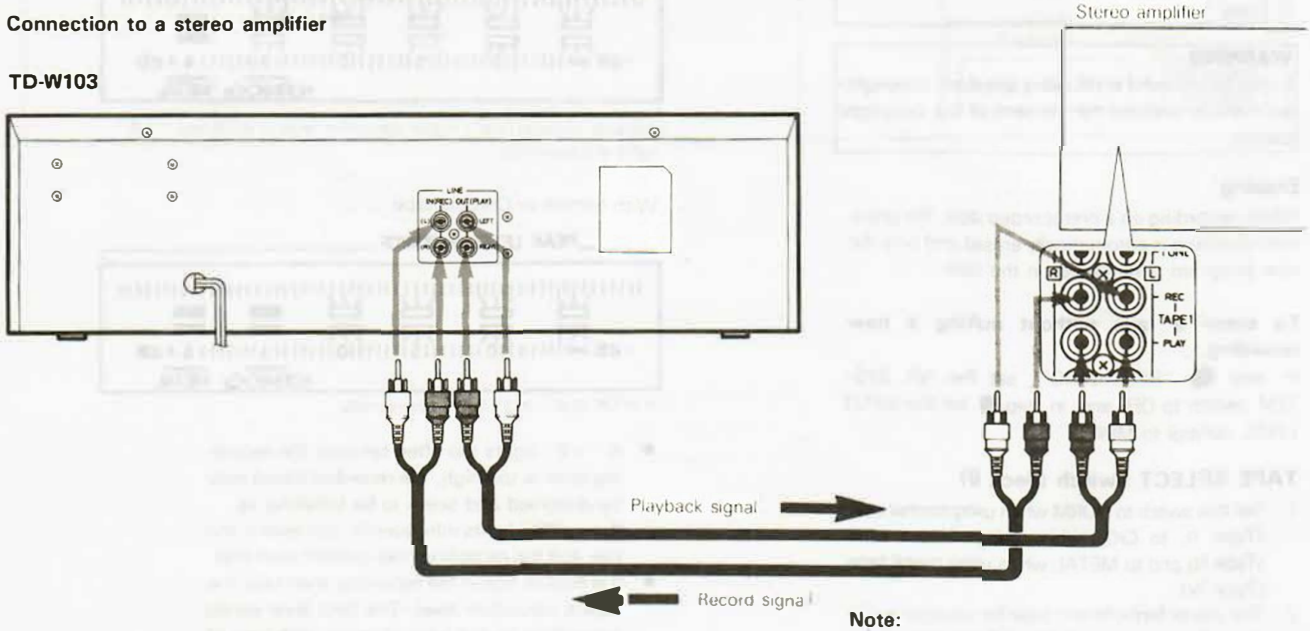
Recording is performed at the same level as the playback tape during dubbing regardless of the position of the INPUT LEVEL control.

CONNECTIONS

- Do not switch the power on until all the connections are completed.
- Insert the plugs firmly, or poor contact will result, causing noise.
- When the pin-plug cords are employed, always connect the white plug to the left channel terminal. This helps avoid reversed connections.

Connection to a stereo amplifier

TD-W103



Note:

When installing the deck, be sure to install at a dis-

6 Location of Main Parts

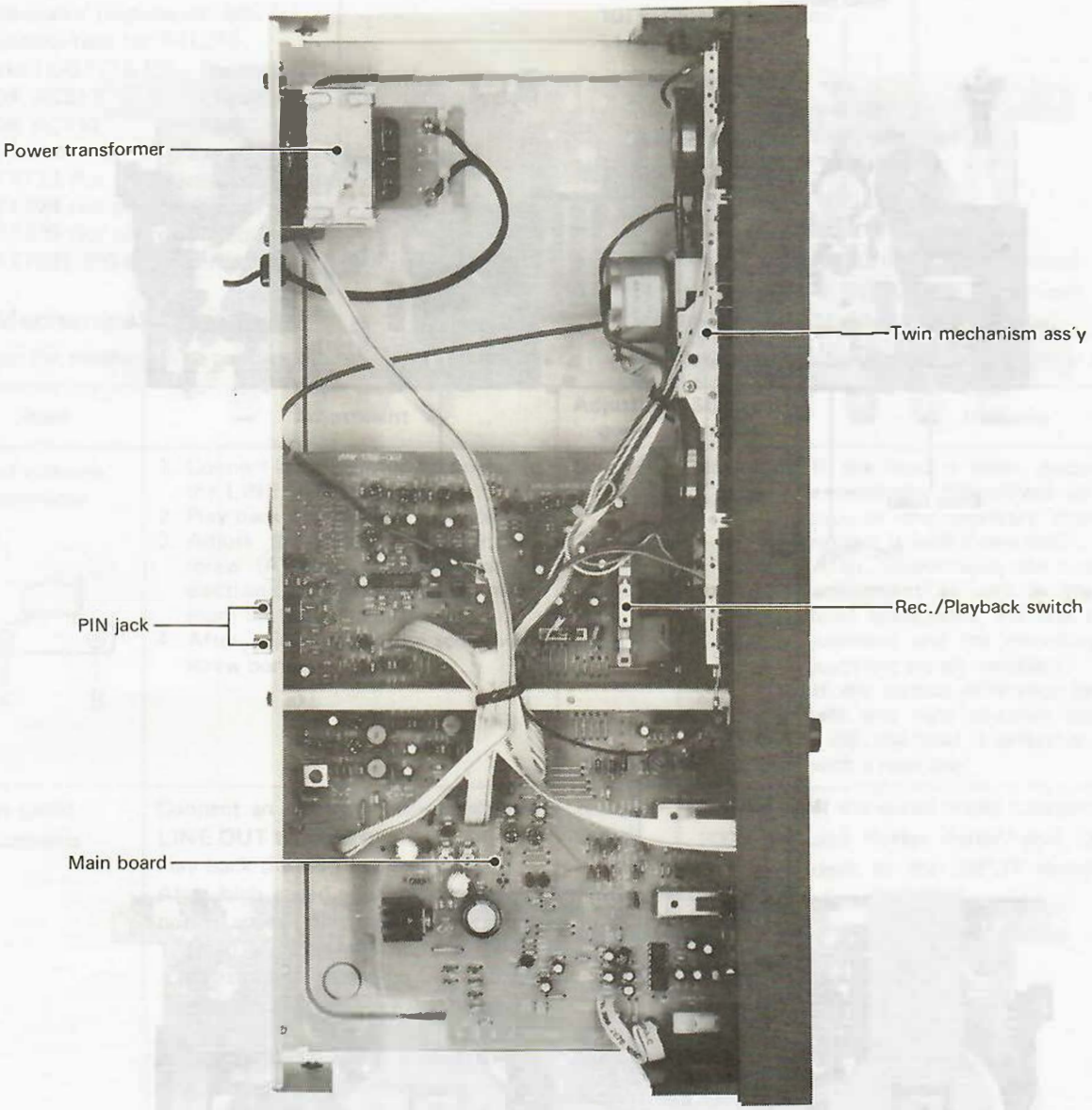


Fig. 6-1

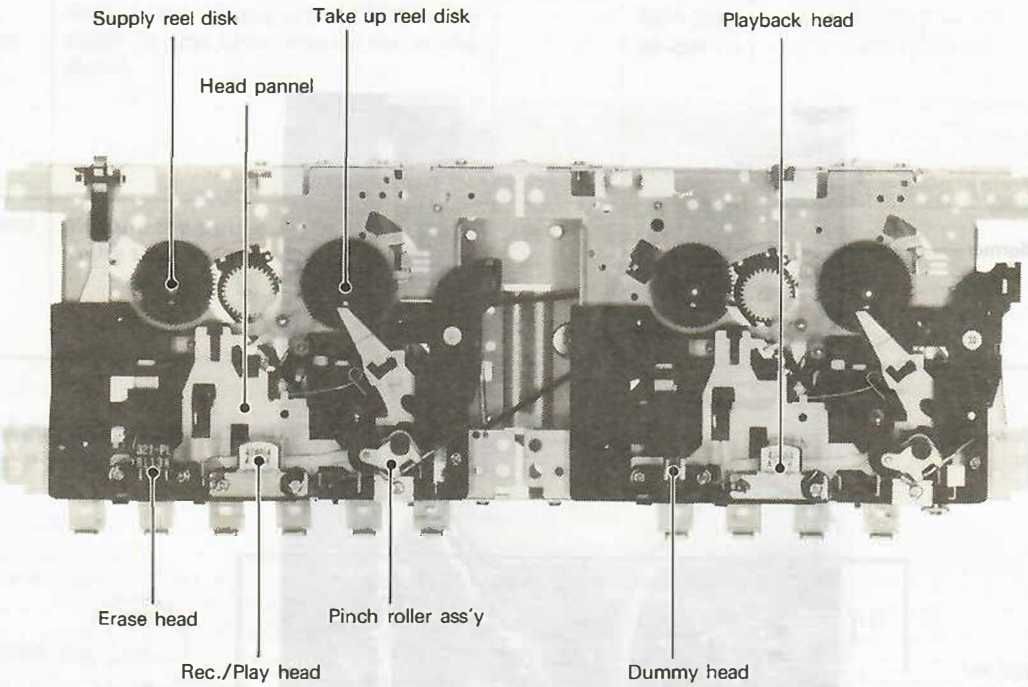

Supply reel disk
Take up reel disk
Playback head
Head pannel
Erase head
Rec./Play head
Pinch roller ass'y
Dummy head

Fig.6-2

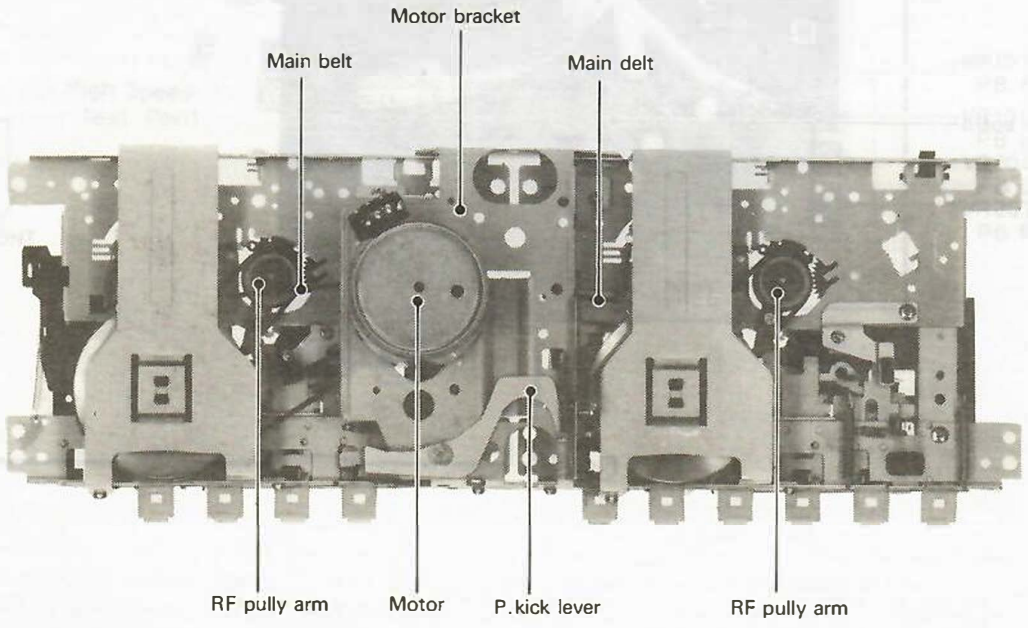

Motor bracket
Main belt
Main delt
RF pully arm
Motor
P.kick lever
RF pully arm

Fig.6-3

7 Removal of Main Parts

■Enclosure Sections

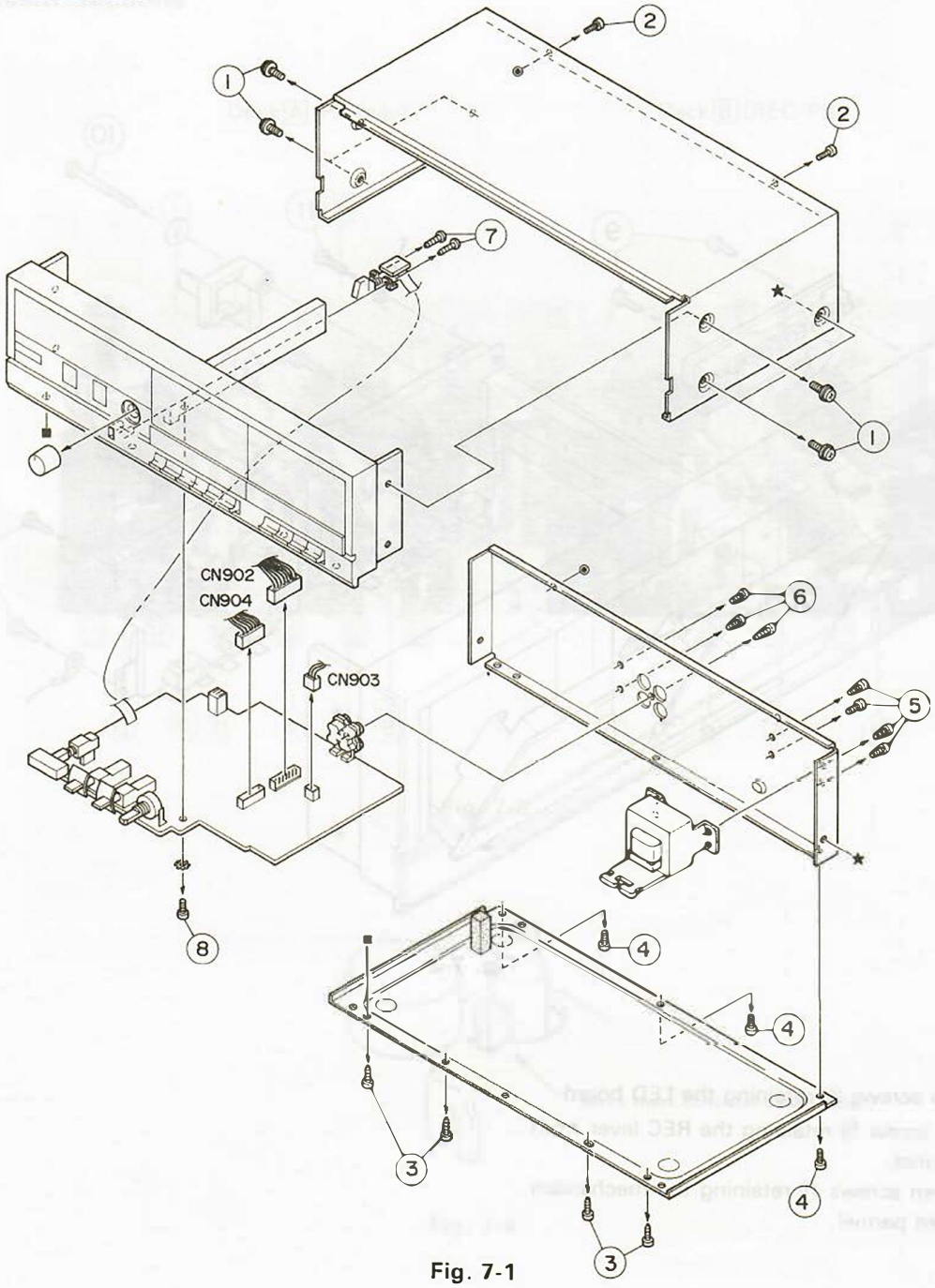


Fig. 7-1

1. Top Cover

1) Remove six screws ① retaining the both sides of the top cover.
2) Remove two screws ② retaining the rear side of the top cover, and take off the top cover.

2. Bottom Cover

Remove seven screws ③ and ④ retaining the bottom cover.

3. Pow Transformer

Remove four screws ⑤ retaining the power transformer from the rear panel.

4. Rear Pannel

Remove three screws ⑥ retaining the rear pannel.

5. Front pannel and Main board.

1) Pull out three connector (CN902, CN903, CN904) from the main board.
2) Pull out the input level knob.
3) Remove two screws ⑦ retaining the DORBY NR switch board, and take off the DORBY NR switch board.
4) Remove the screw ⑧ retainng the main board.

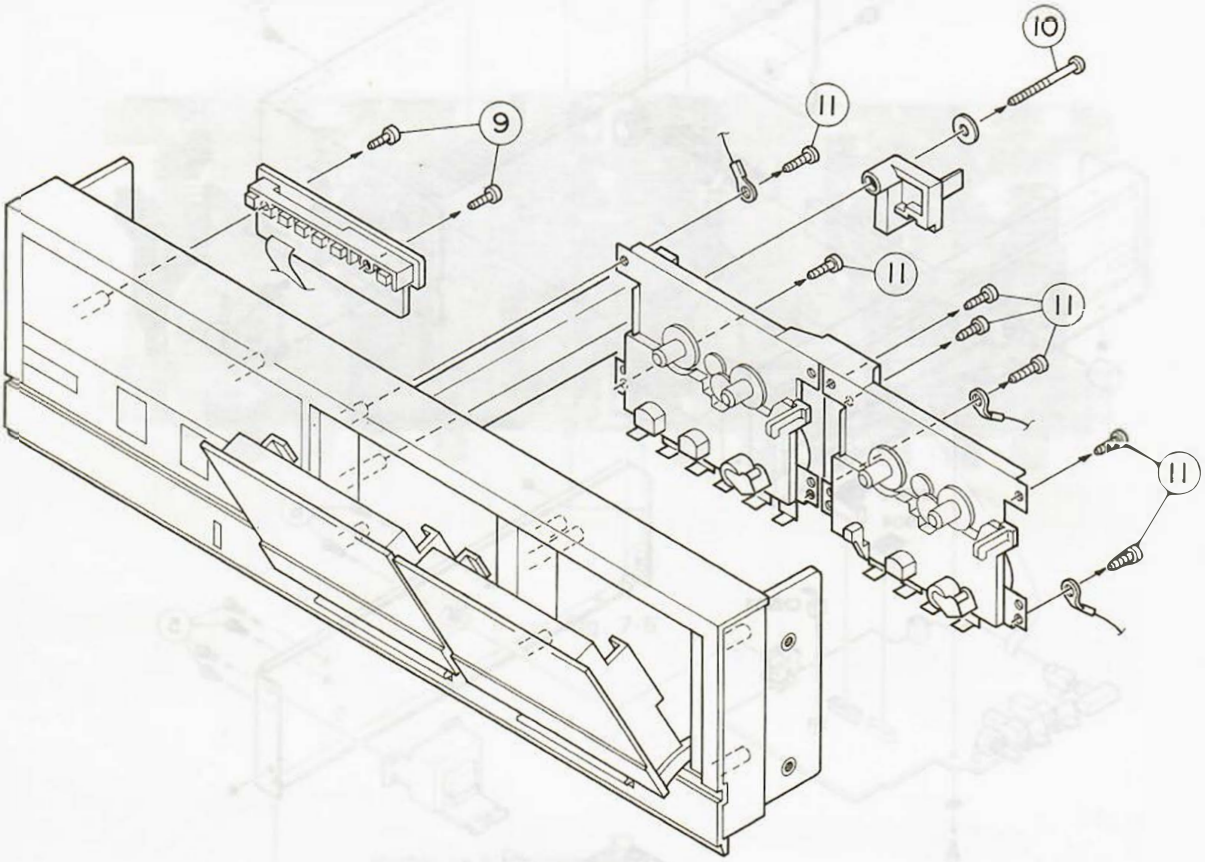


Fig. 7-2

5) Remove two screws ⑨ retaining the LED board
6) Remove the screw ⑩ retaining the REC lever from the front pannel.
7) Remove seven screws ⑪ retaining the mechanism from the front pannel.

■ Mechanism Sections

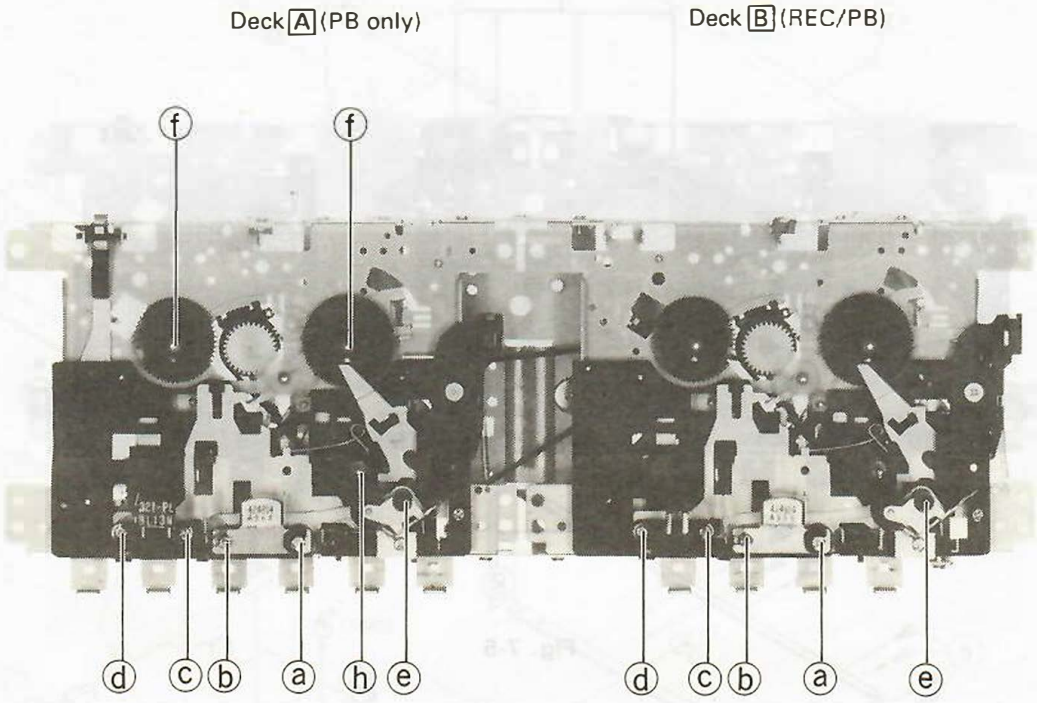


Fig. 7-3

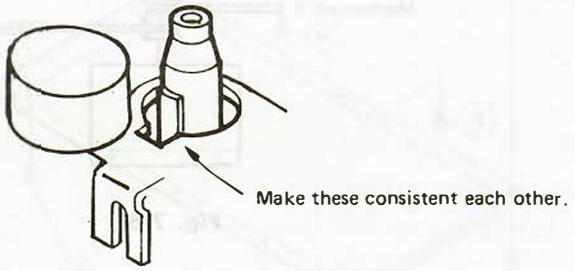


Fig. 7-4

■ **Removal of mechanism parts**

1. PB head and REC PB head (Deck A and Deck B)
   1) Remove one screw ⓐ retaining the right side of the head.
   2) Loosen the screw ⓑ, and draw out the head.
2. Dummy head and Erase head (Deck A and Deck B)
   Remove two screws ⓒ and ⓓ retaining the dummy head and the erase head.
3. Pinch roller ass'y
   1) Remove one screw ⓔ retaining the pinch roller ass'y.
   2) Turn the pinch roller ass'y leftwards and pull it up.

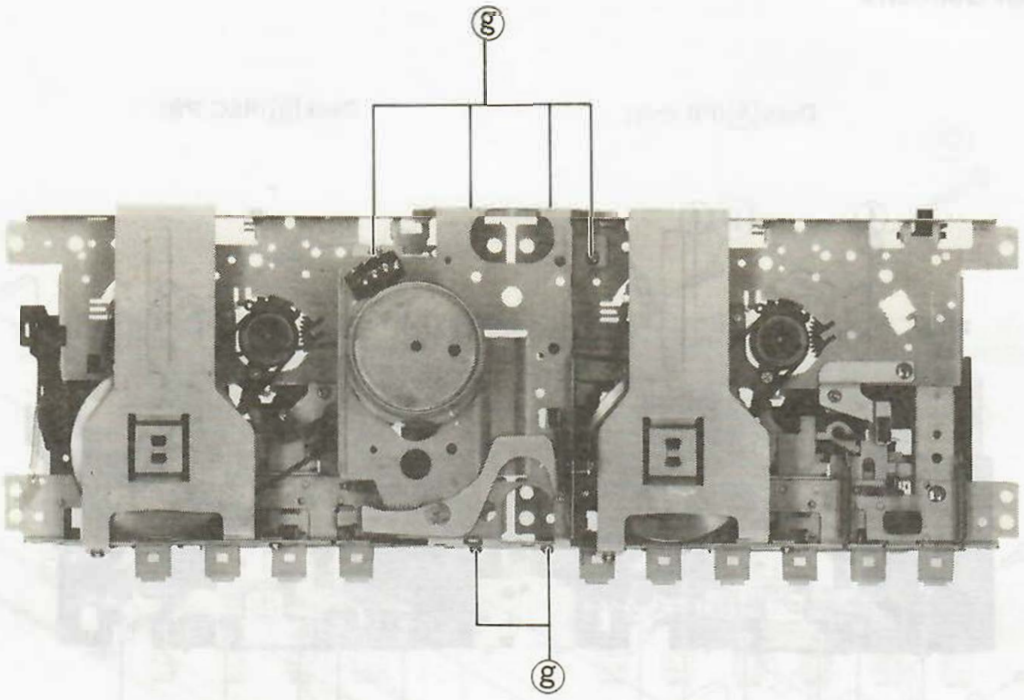


Fig. 7-5

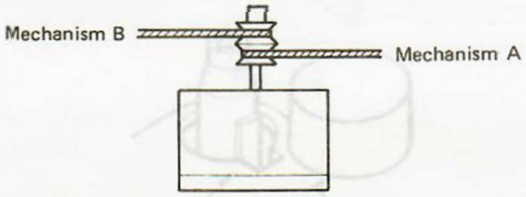


Fig. 7-6

4. Reel disk ass'y
   Remove the reel disk stopper ⓕ.

5. Motor ass'y
   1) Remove six screws ⓖ retaining the motor bracket.
   2) To remove the motor bracket, remove it from the head side (bottom side) of the chassis first, and then disengage the pawls of the top side.
   3) The drive belt can be removed.
   4) Remove the motor ass'y from the motor bracket ass'y.

   Note: How to engage the drive belt
   Engage the drive belt for the mechanism A with the pulley located near the motor.

6. Flywheel ass'y
   Remove one washer ⓗ.

8 Main Adjustments

1. Equipment and measuring instruments used for adjustments

1) Electronic voltmeter
2) Audio frequency oscillator
   (range: 50–20 kHz and output 0 dB with impedance of 600 Ω)
3) Attenuator (impedance: 600 Ω)
4) Standard tape for REC/PB
   Maxell UD1 (TS-12)– Normal (SF) tape
   TDK AC513 – Chrome (SA) tape – or equivalent
   TDK AC712 – Metal tape
5) Reference tape for playback (JVC Test Tape)
   VTT712 (for tape speed, wow flutter adj.)
   VTT724 (for playback level)
   VTT739 (for playback frequency response)
   VTT703L (10 kHz) (for head azimuth adj.)
6) Resistor 600 Ω (for attenuator matching)
7) Distortion meter (bandpass filter)
8) Torque testing cassette gauge, CTG-N
9) Wow flutter meter
10) Frequency counter
11) M-300 gauge

■ **Standard level**

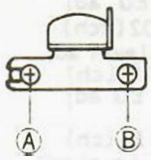
Line out	–8 dBs
Line in	–20 dBs

■ **Power source**

AC 120 V, 60 Hz (C/J version)
AC 120 V, 60 Hz (C/J version)
AC 240/220/120 V, 50/60 Hz (A/B version)
AC 240/220/120 V, 50/60 Hz (E/G version)
AC 230/127/110 V, 50/60 Hz (U version)

2. Mechanical adjustment

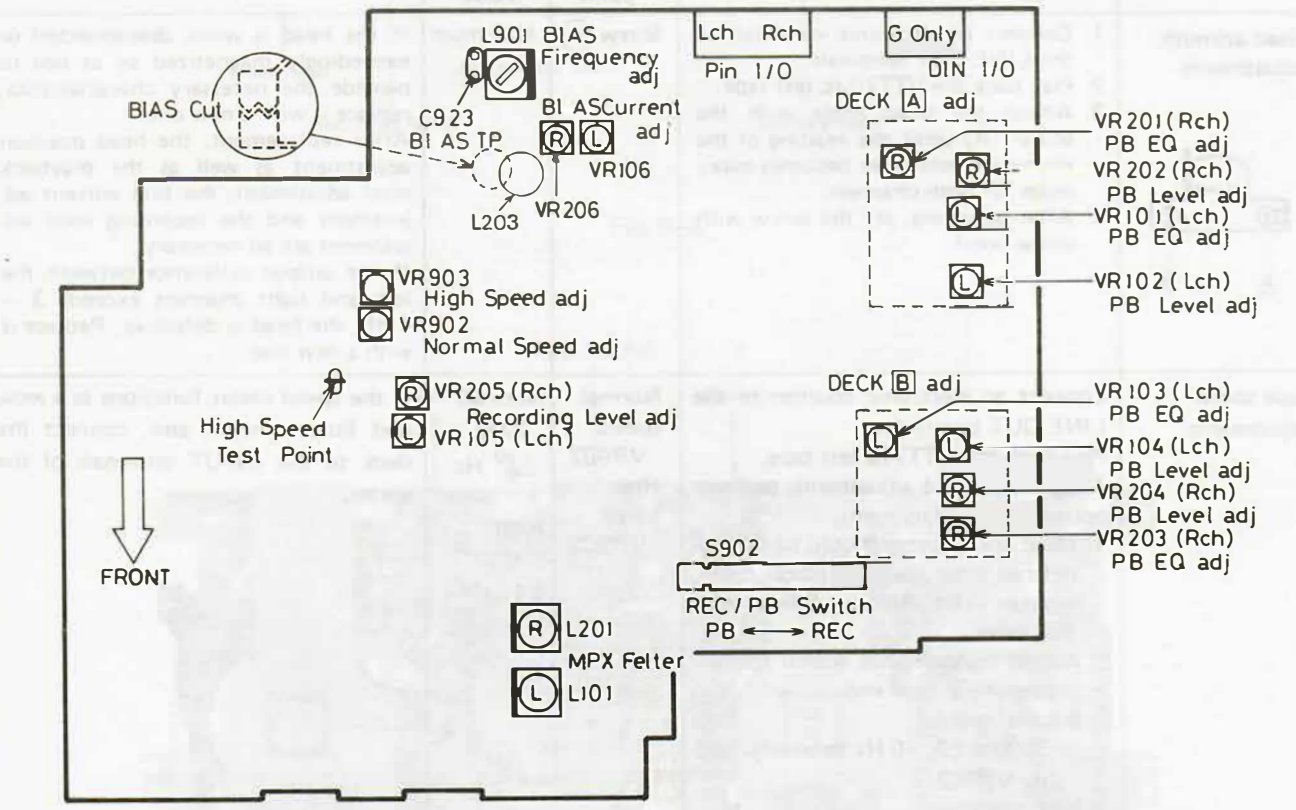
(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

Item	Adjustment	Adjusting point	Standard value	Remarks
Head azimuth adjustments 	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT703L test tape. 3. Adjust the head angle with the screw (A) until the reading of the electronic voltmeter becomes maximum for both channels. 4. After adjusting, set the screw with screw bond.	Screw (A)	Maximum	If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one. After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary. If the output difference between the left and right channels exceeds 3 – 4 dB, the head is defective. Replace it with a new one.
Tape speed adjustments	Connect an electronic counter to the LINE OUT terminals. Play back the VTT712 test tape. After high speed adjustment, perform normal speed adjustment. 1. Head and capstan should be demagnetized after cleaning pinch roller, capstan shaft, R/P and E head with flon salve. 2. Adjust motor speed within following figures at tape end. Normal speed: 3000 ± 20, –0 Hz to be adjusted by VR902. High speed: Should be high speed adjust after normal speed adjusting.	Normal speed: VR902 High speed: VR903	Normal: 3000 $^{+20}_{-0}$ Hz High: 6000 ± 15 Hz	If the speed meter functions as a wow and flutter meter, also, connect the deck to the INPUT terminals of the meter.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.17% (WRMS).		0.17% (WRMS)	If the reading becomes moving value even if conforming to the standard, a re-claim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		30–75 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.

Item	Adjustment	Adjusting point	Standard value	Remarks
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		60~200 gr-cm	
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		60~200 gr-cm	

3. Electrical adjustments location

Main Amp. P.W. Board (parts assembly side view)



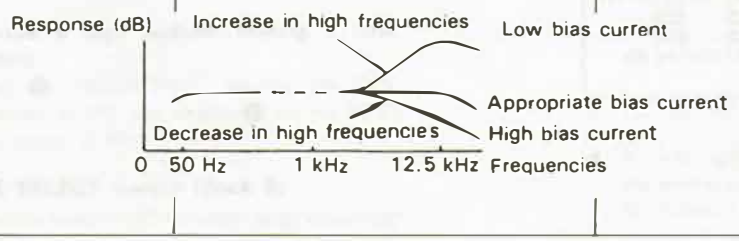
4. Electrical circuit adjustment procedure

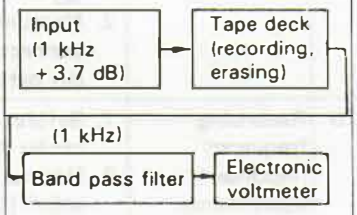
Perform the tape transport checks and head azimuth adjustment before following checks and adjustments.
Adjustment should be performed in the order of alignment steps.
In the steps marked with an asterisk (*), adjustment should be performed after replacing the heads.
Perform this adjustment with the NR switch set to OFF.

Step	Item	Check and Adjustment			
1	Checking DOLBY circuit (Rec mode) (BIAS, CUT)			Input signal (Frequency; level)	Output raise value, deviation value
		Signal input: LINE IN Cal. level: 400 Hz, −2.5 dBs Output terminal: NR. TP IC905 ⑧ & ⑨	DOLBY B (Rec)	1 kHz, Cal. − 40 dB	+ 5.7 dB ± 2 dB
				5 kHz, Cal. − 20 dB	+ 3.5 dB ± 1.5 dB
				1 kHz, Cal.	0 dB ± 0.5 dB

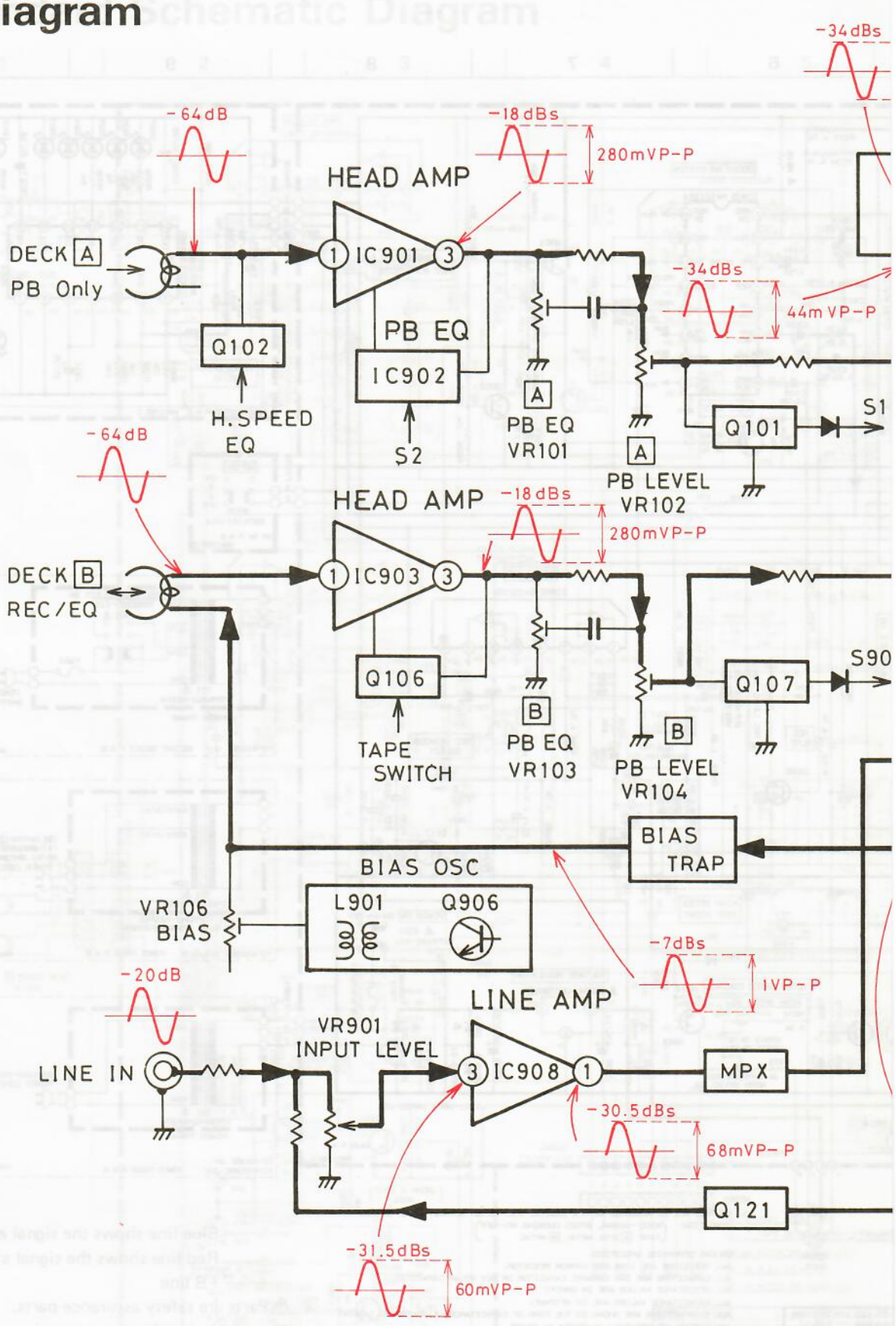
0 dBs : 0.775V

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*2	Confirming playback output level	Play back VTT724, then confirm that the level at LINE OUT is −8 dBs ± 0.5 dB. Adjust VR102, VR202 and VR104, VR204 so that LINE OUT level becomes −8 dBs.	Deck Ⓐ L : VR102 R : VR202 Deck. Ⓑ L : VR104 R : VR204	−8 dBs ± 0.5 dB	When the head is replaced, adjust playback gain level. Test tape : VTT724
*3	Playback frequency response adjustments	Deck Ⓐ: Play back VTT739, then confirm that the level of 1 kHz and 10 kHz signals is 1 ± 0.5 dB. Adjust VR101, VR201 and VR103, VR203 so that line out level becomes 1 dB (Deck Ⓐ) or +0.5 dB (Deck Ⓑ).	Deck Ⓐ L : VR101 R : VR201 Deck Ⓑ L : VR103 R : VR203	Deck Ⓐ : 1 dB ± 0.5 dB Deck Ⓑ : 0.5 dB ± 0.5 dB	
*4	Adjusting bias frequency	1. Adjust L901 and set to 95 kHz ± 1 kHz. Ⓑ Mechanism metal rec/play. 2. Measurement points should be connected to body of C923. Bias cut pattern to be shortened.	L901	95 kHz ± 1 Hz	METAL Position
*5	Recording frequency response adjustments	1. Before recording to be preset at center (VR106, VR206). 2. Normal reference: −20 dB, 12.5 kHz/1(1.25) kHz within 0.5 dB ± 0.5 dB. VR106, VR206 to be adjusted. 3. CrO_2 and metal reference: −20 dB, 12.5 kHz/1(1.25) kHz within 0 dB ± 3 dB. Only checking	For Normal tape L : VR106 R : VR206	With respect to 1 kHz reference: At 50 Hz, 0 ± 3 dB At 12.5 kHz 1 ± 0.5 dB	NR : OFF Deviation 10 kHz/250 Hz REC/PB within 3 dB NR : ON 12.5 kHz/1 kHz Normal: ±4 dB CrO_2 : ±5 dB Metal : ±5 dB 10 kHz/250 Hz within 6 dB to be checked.

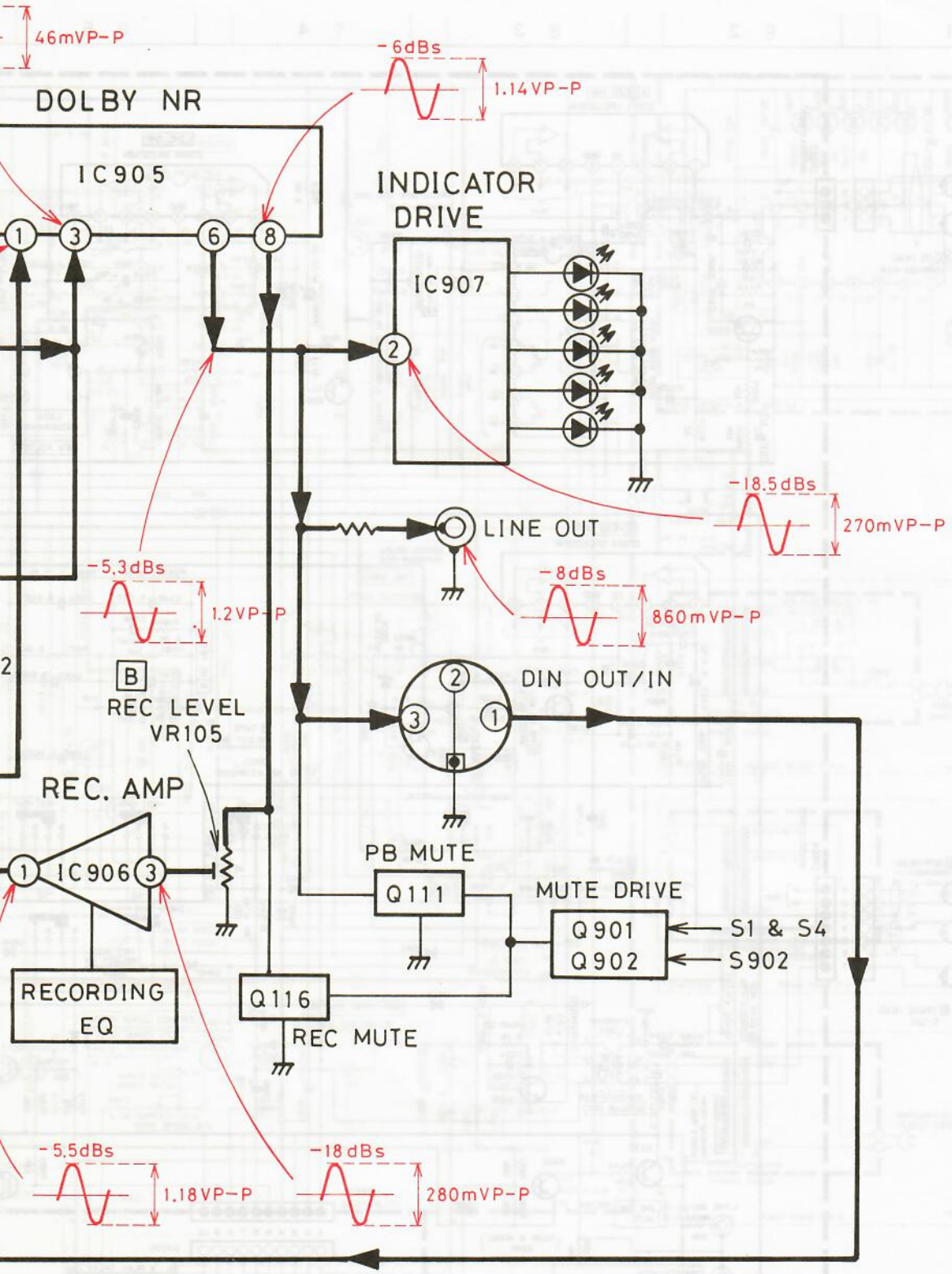


Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*6	Rec/playback sensitivity adjustment	1) Apply a 1 kHz signal to the LINE IN terminals, record a 1 kHz signal at reference level (−8 dBs) input for both (L and R) channels on a normal tape. 2) Play back the recorded part, and adjust the recording level controls so that LINE OUT terminal level becomes −8 dBs. Then adjust VR105 and VR205 so that LINE OUT terminal level becomes −8 dBs.	For Normal tape: L: VR105 R: VR205	Normal: −8 dBs ± 0.5 dB CrO_2: −8 dBs ± 2 dB Metal: −8 dBs ± 2 dB	
*7	Checking record/ playback distortion	1) Record a 1 kHz, − 20 dB signal to LINE IN terminals. 2) Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		Normal tape: Less than 2% CrO_2 tape: Less than 3% Metal tape: Less than 2% (THD)	Be sure to perform this checking following bias current and recording level checking.
8	Checking signal to noise ratio in recording/ playback	1) Record a 1 kHz, − 20 dB signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2) Play back the recorded part. Measure the −8 dBs recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		Normal, CrO_2 & Metal tapes: More than 42 dB	Apply an input level to LINE IN terminals with the recording level controls set to maximum so that the peak level indicator reads 0 dB.
9	Checking erasing coefficient	1) Apply a 1 kHz − 20 dB signal to the LINE IN terminals. 2) Perform recording with the signal enhanced by 20 dB. 3) Erase a part of the recording. 4) Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 55 dB	For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. 

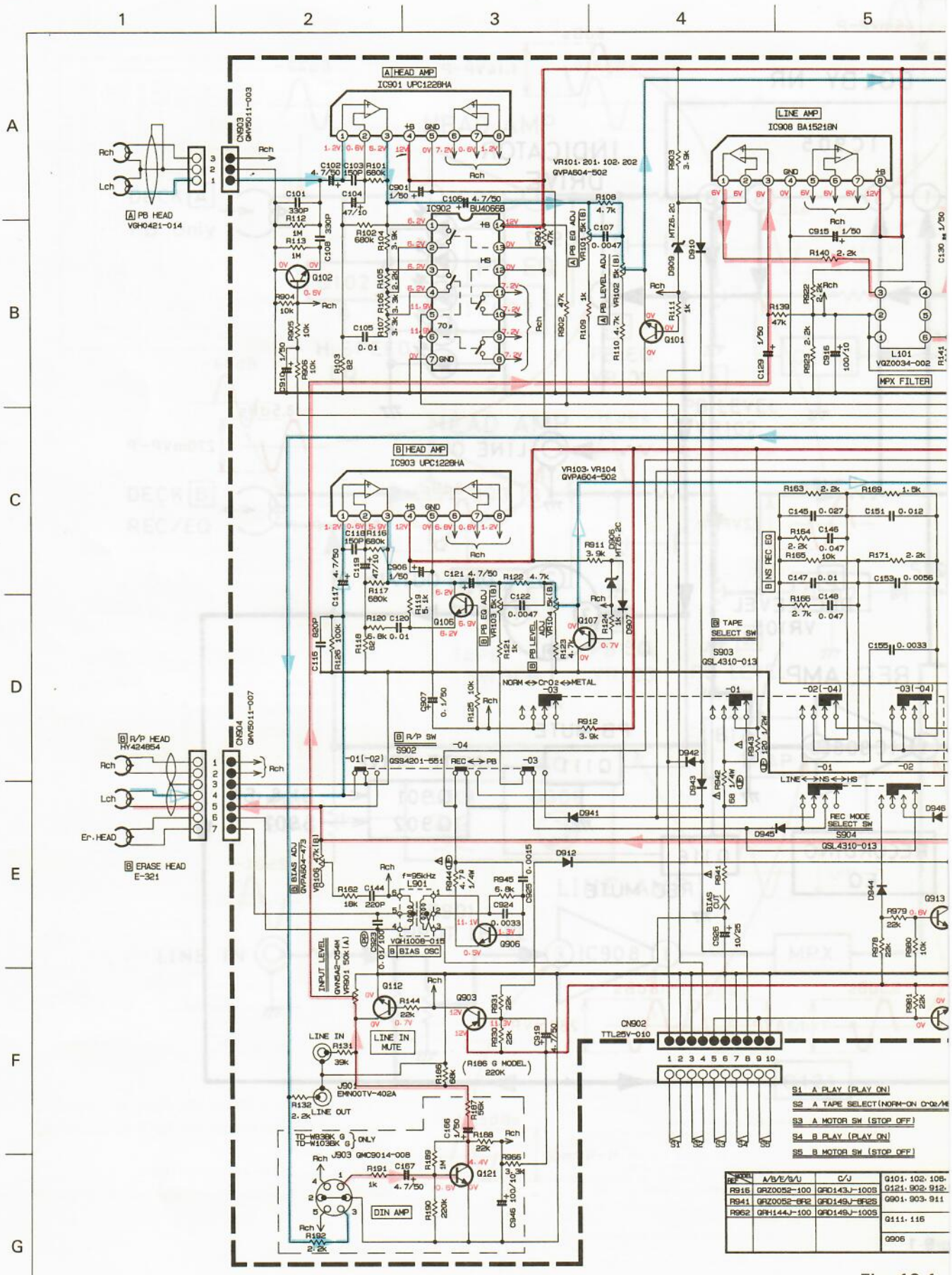
9 Block Diagram



Fig

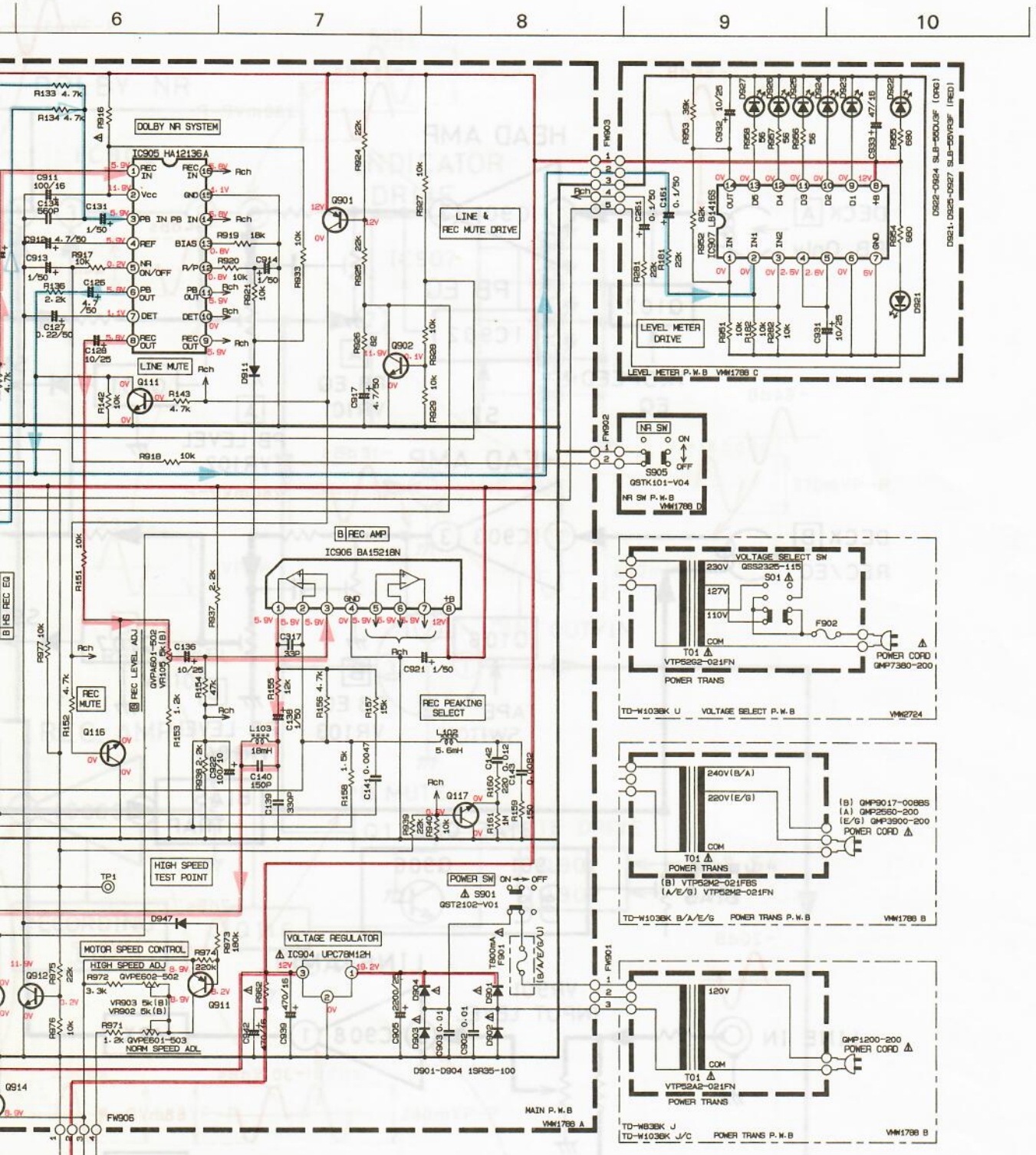

46mVP-P
-6dBs
1.14VP-P
DOLBY NR
IC905
INDICATOR
DRIVE
IC907
-18.5dBs
270mVP-P
LINE OUT
-5.3dBs
1.2VP-P
-8dBs
860mVP-P
B
REC LEVEL
VR105
DIN OUT/IN
REC. AMP
IC906
PB MUTE
Q111
MUTE DRIVE
Q901
Q902
S1 & S4
S902
RECORDING
EQ
Q116
REC MUTE
-5.5dBs
1.18VP-P
-18dBs
280mVP-P

10 Standard Schematic Diagram



REF	A/B/E/G/U	C/J	MODEL
R916	GRZ0052-100	GRD143J-100S	Q101, 102, 106, Q121, 902, 912,
R941	GRZ0052-8R2	GRD149J-8R2S	Q901, 903, 911
R962	GRH144J-100	GRD149J-100S	Q111, 116
			Q906

Fig. 10-1



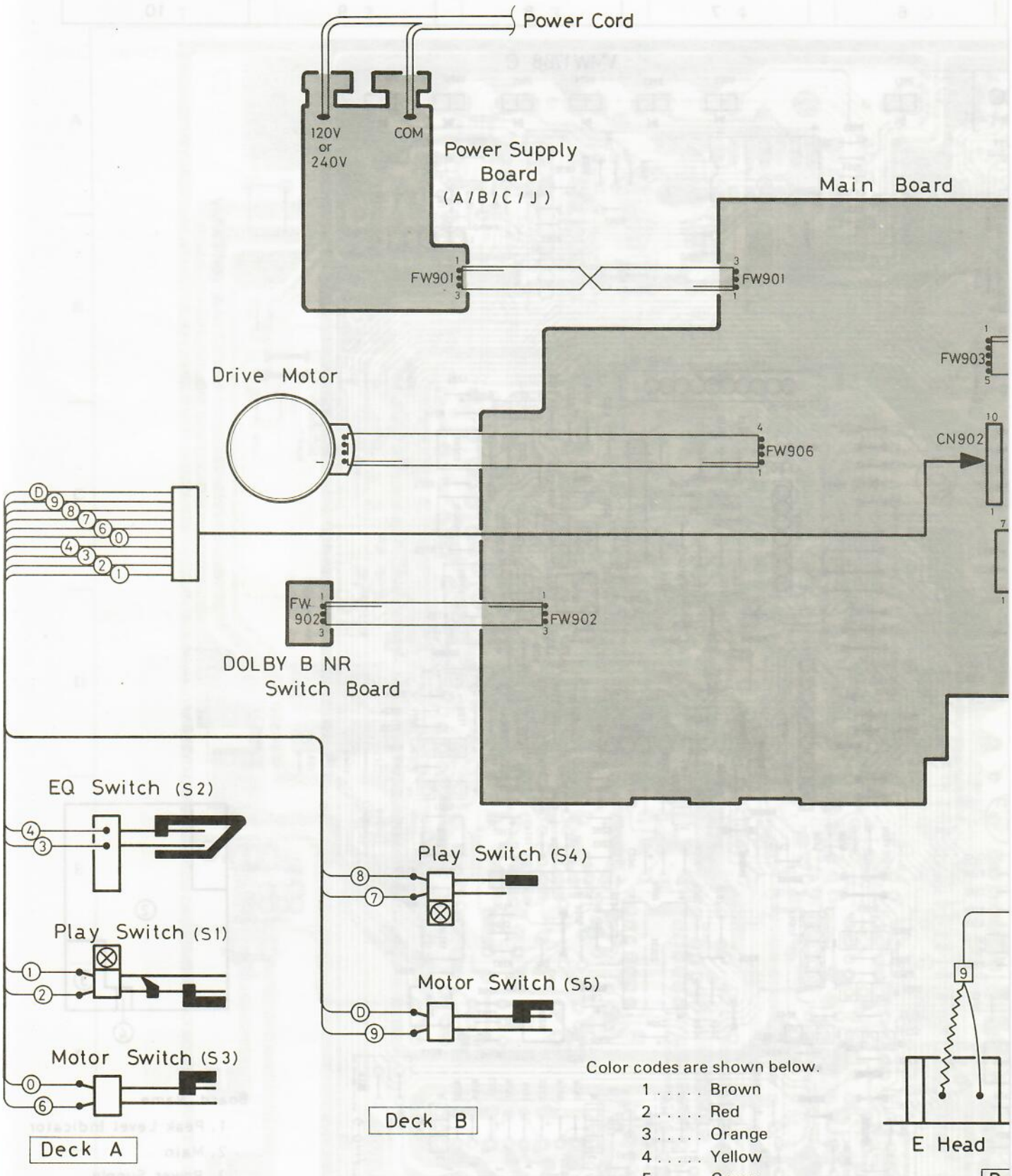
NOTES

1. VOLTAGE ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL
   CONDITION: (MODE—NORMAL SPEED DUBBING NR—OFF
   TAPE [A] Cr-O2 · METAL [B] METAL)
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR
   ALL RESISTANCE VALUES ARE IN OHM(Ω)
   ALL CAPACITANCE VALUES ARE IN μF(P=pF)
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE(V)
   ALL DIODES ARE HSS104TJ or 1SS254 or MA165
   (DE) UNFLAMMABLE CARBON RESISTOR
   (PP) POLYPROPYLENE CAPACITOR
3. THE RESISTORS LISTED BELOW ARE FUSIBLE RESISTOR IN THE MODEL TD-W1038K B/A/E/G/U

107, 112, 117, 913, 914	2SC1685 (R, S)
	2SA564 (R, S)
	2SC2001 (R, S)
	2SC1318 (R, S)

Blue line shows the signal at playback.
Red line shows the signal at recording.
+B line
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

1 Wiring Connections



Color codes are shown below.

1 . . . . . Brown
2 . . . . . Red
3 . . . . . Orange
4 . . . . . Yellow
5 . . . . . Green
6 . . . . . Blue
7 . . . . . Violet
8 . . . . . Grey
9 . . . . . White
0 . . . . . Black

Fig. 11-1

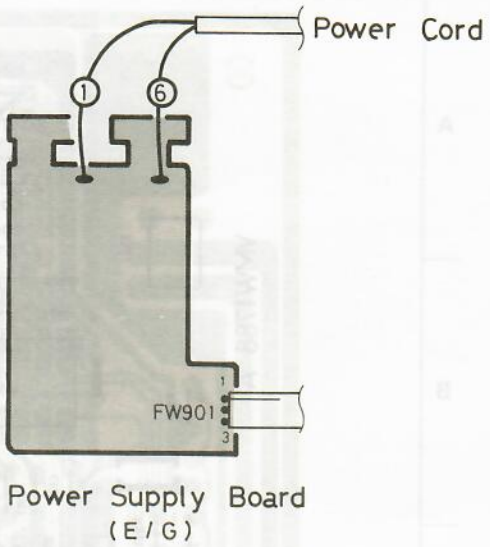
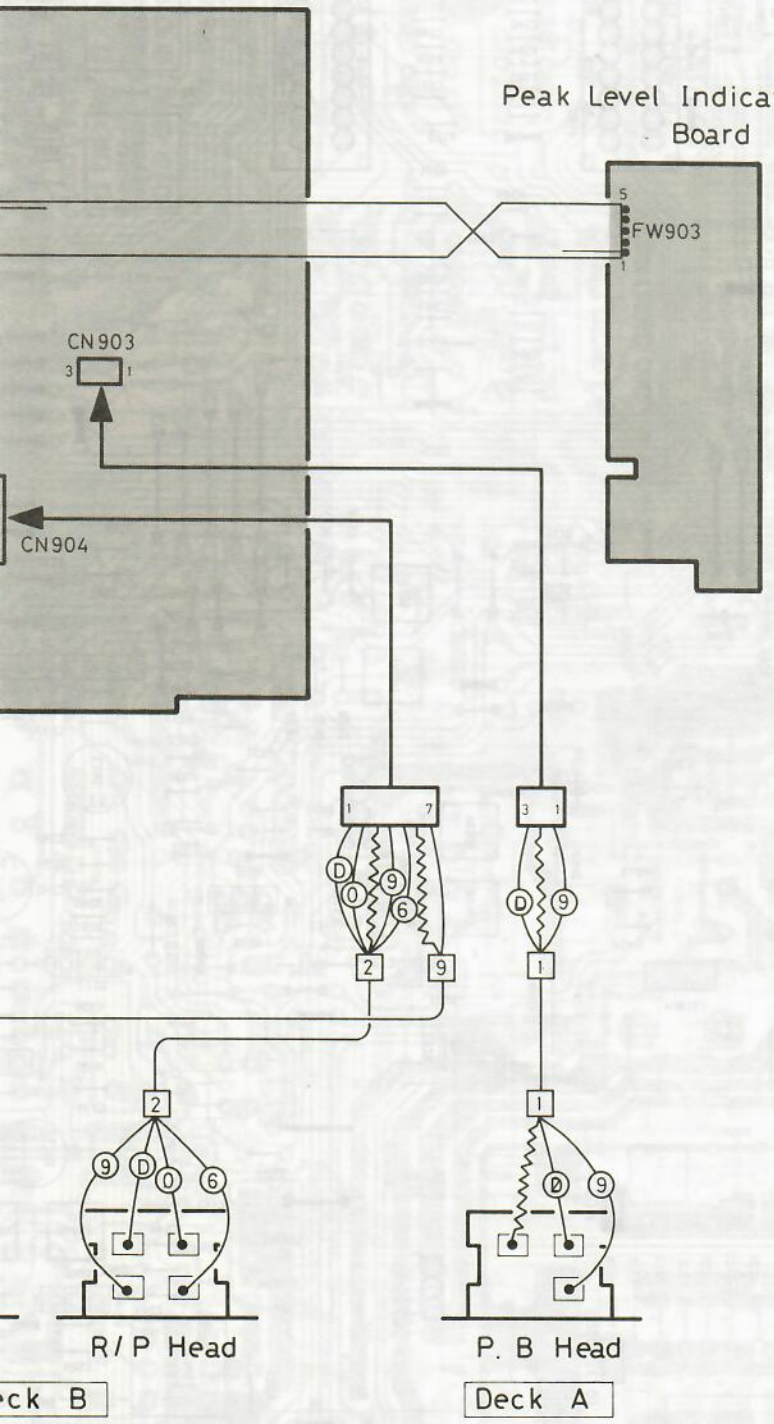


Fig. 11-2



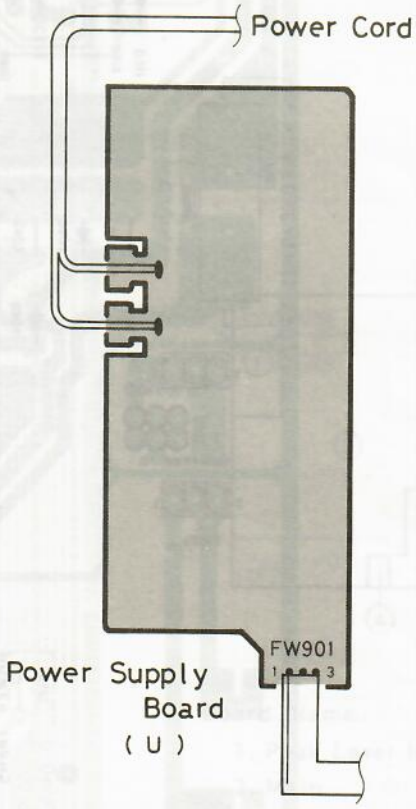


Fig. 11-3

12 Location of P.C. Board Parts and Parts List

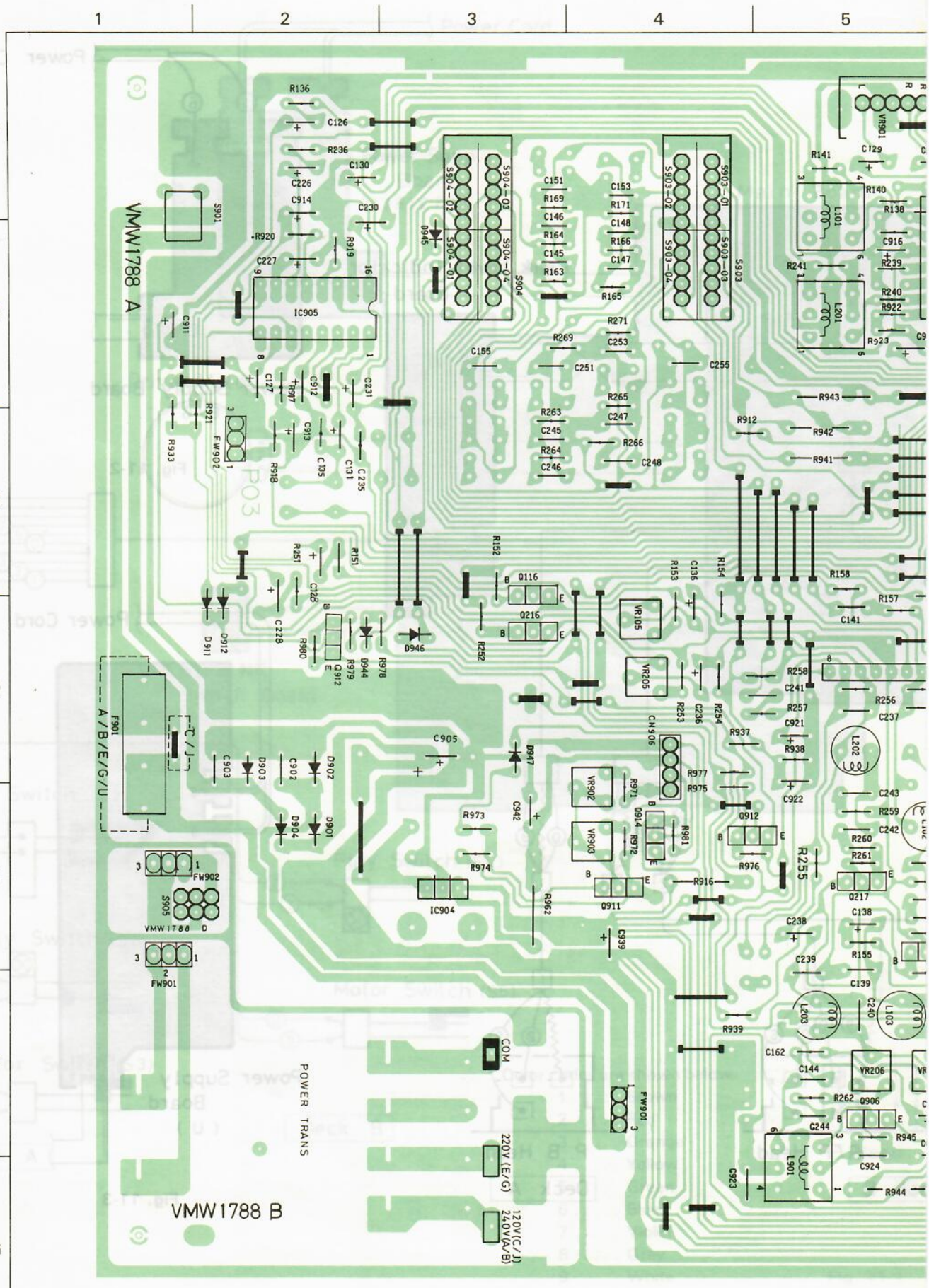
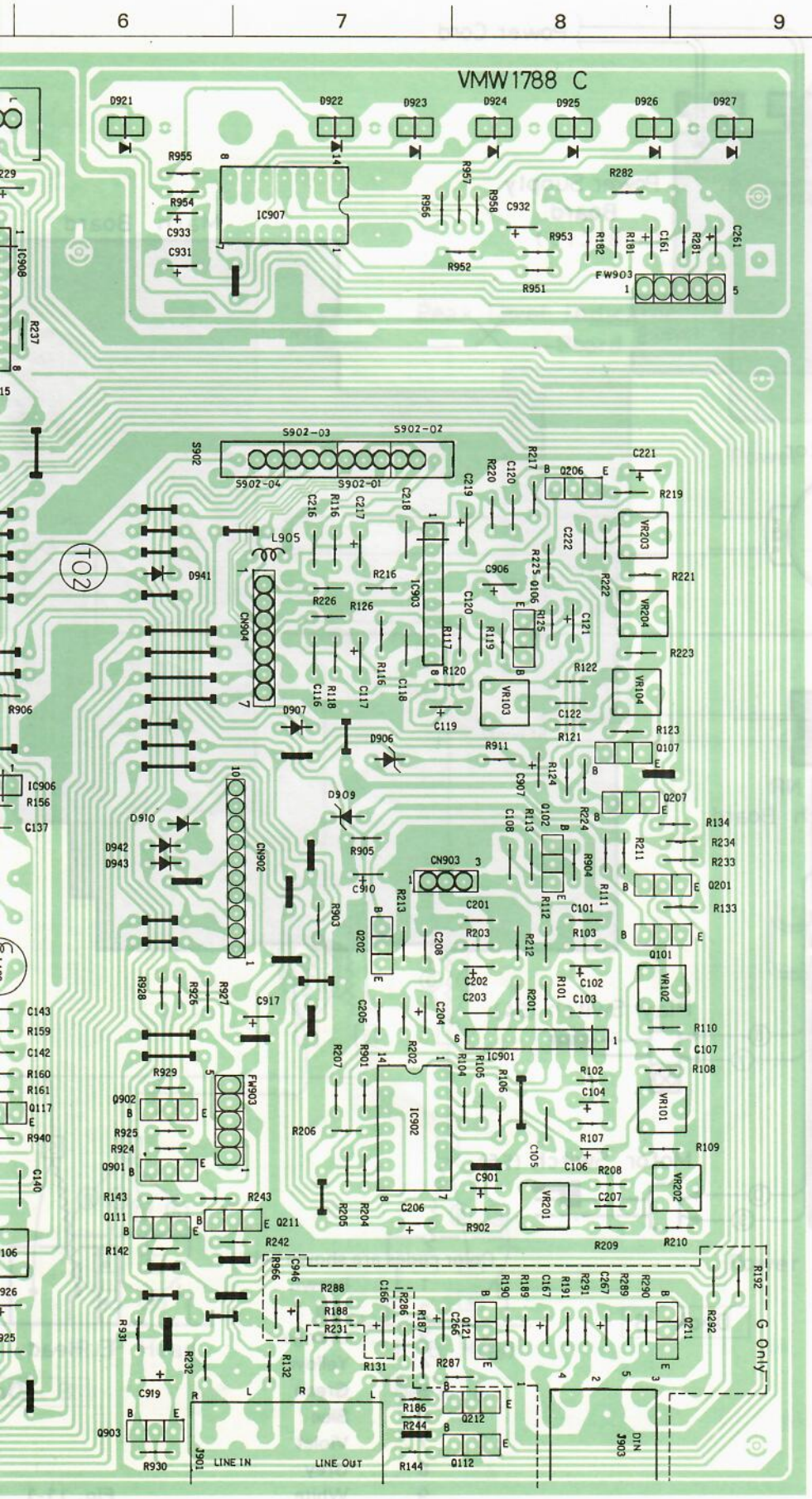
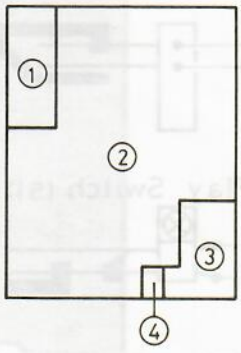


Fig. 12-1





Board Name

1. Peak Level Indicator
2. Main
3. Power Supply
4. DOLBY B NR Switch

■ P. C. Board Parts List

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME
	CN902	TTL25V-010	CONNECTOR
	CN903	QMV5011-003	CONNECTOR
	CN904	QMV5011-007	CONNECTOR
	C101	QCS31HJ-331Z	C.CAPACITOR
	C102	QETC1HM-475ZN	E.CAPACITOR
	C103	QCS31HJ-151Z	C.CAPACITOR
	C104	QETC1CM-476ZN	E.CAPACITOR
	C105	QFV71HJ-103ZM	TF.CAPACITOR
	C106	QETC1HM-475ZN	E.CAPACITOR
	C107	QFN31HJ-472Z	M.CAPACITOR
	C108	QCS31HJ-331Z	C.CAPACITOR
	C116	QCS31HJ-821Z	C.CAPACITOR
	C117	QETC1HM-475ZN	E.CAPACITOR
	C118	QCS31HJ-151Z	C.CAPACITOR
	C119	QETC1CM-476ZN	E.CAPACITOR
	C120	QFV71HJ-103ZM	TF.CAPACITOR
	C121	QETC1HM-475ZN	E.CAPACITOR
	C122	QFN31HJ-472Z	M.CAPACITOR
	C126	QETC1HM-475ZN	E.CAPACITOR
	C127	QETC1HM-224ZN	E.CAPACITOR
	C128	QETC1EM-106ZN	E.CAPACITOR
	C129	QETC1HM-105ZN	E.CAPACITOR
	C130	QETC1HM-105ZN	E.CAPACITOR
	C131	QETC1HM-105ZN	E.CAPACITOR
	C134	QCBB1HK-561Y	C.CAPACITOR
	C136	QETC1EM-106ZN	E.CAPACITOR
	C137	QCS31HJ-330Z	C.CAPACITOR
	C138	QETC1HM-105ZN	E.CAPACITOR
	C139	QCS31HJ-331Z	C.CAPACITOR
	C140	QCS32HJ-151ZV	C.CAPACITOR
	C141	QCY31HK-472Z	C.CAPACITOR
	C142	QFV71HJ-123ZM	TF CAPACITOR
	C143	QFN31HJ-822Z	M.CAPACITOR
	C144	QCS31HJ-221Z	C.CAPACITOR
	C145	QCC31EM-273ZV	C.CAPACITOR
	C146	QCC31EM-473ZV	C.CAPACITOR
	C147	QCC31EM-103ZV	C.CAPACITOR
	C148	QCC31EM-473ZV	C.CAPACITOR
	C151	QCC31EM-123ZV	C.CAPACITOR
	C153	QCY31HK-562Z	C.CAPACITOR
	C155	QCY31HK-332Z	C CAPACITOR
	C161	QETC1HM-104ZN	E.CAPACITOR
	C166	QETC1HM-105ZN	E.CAPACITOR
	C167	QETC1HM-475ZN	E.CAPACITOR
	C201	QCS31HJ-331Z	C.CAPACITOR
	C202	QETC1HM-475ZN	E.CAPACITOR
	C203	QCS31HJ-151Z	C.CAPACITOR
	C204	QETC1CM-476ZN	E.CAPACITOR
	C205	QFV71HJ-103ZM	TF.CAPACITOR
	C206	QETC1HM-475ZN	E.CAPACITOR
	C207	QFN31HJ-472Z	M.CAPACITOR
	C208	QCS31HJ-331Z	C.CAPACITOR
	C216	QCS31HJ-821Z	C.CAPACITOR
	C217	QETC1HM-475ZN	E.CAPACITOR
	C218	QCS31HJ-151Z	C.CAPACITOR
	C219	QETC1CM-476ZN	E.CAPACITOR
	C220	QFV71HJ-103ZM	TF.CAPACITOR
	C221	QETC1HM-475ZN	E.CAPACITOR
	C222	QFN31HJ-472Z	M.CAPACITOR
	C226	QETC1HM-475ZN	E.CAPACITOR
	C227	QETC1HM-224ZN	E.CAPACITOR
	C228	QETC1EM-106ZN	E.CAPACITOR
	C229	QETC1HM-105ZN	E.CAPACITOR
	C230	QETC1HM-105ZN	E.CAPACITOR
	C231	QETC1HM-105ZN	E.CAPACITOR
	C234	QCBB1HK-561Y	C.CAPACITOR
	C236	QETC1EM-106ZN	E.CAPACITOR
	C237	QCS31HJ-330Z	C.CAPACITOR
	C238	QETC1HM-105ZN	E.CAPACITOR
	C239	QCS31HJ-331Z	C.CAPACITOR
	C240	QCS32HJ-151ZV	C.CAPACITOR
	C241	QCY31HK-472Z	C.CAPACITOR
	C242	QFV71HJ-123ZM	TF CAPACITOR
	C243	QFN31HJ-822Z	M.CAPACITOR
	C244	QCS31HJ-221Z	C.CAPACITOR

⚠	REF.	PARTS NO.	PARTS NAME
	C245	QCC31EM-273ZV	C.CAPACITOR
	C246	QCC31EM-473ZV	C.CAPACITOR
	C247	QCC31EM-103ZV	C.CAPACITOR
	C248	QCC31EM-473ZV	C.CAPACITOR
	C251	QCC31EM-123ZV	C.CAPACITOR
	C253	QCY31HK-562Z	C.CAPACITOR
	C255	QCY31HK-332Z	C CAPACITOR
	C261	QETC1HM-104ZN	E.CAPACITOR
	C266	QETC1HM-105ZN	E.CAPACITOR
	C267	QETC1HM-475ZN	E.CAPACITOR
	C901	QETC1HM-105ZN	E.CAPACITOR
	C902	QCF31HP-103Z	C.CAPACITOR
	C903	QCF31HP-103Z	C.CAPACITOR
⚠	C905	QETB1EM-228N	E.CAPACITOR
	C906	QETC1HM-105ZN	E.CAPACITOR
	C907	QETC1HM-104ZN	E.CAPACITOR
	C910	QETC1HM-105ZN	E.CAPACITOR
	C911	QETC1CM-107ZN	E.CAPACITOR
	C912	QETC1HM-475ZN	E.CAPACITOR
	C913	QETC1HM-105ZN	E.CAPACITOR
	C914	QETC1HM-105ZN	E.CAPACITOR
	C915	QETC1HM-105ZN	E.CAPACITOR
	C916	QETC1AM-107ZN	E.CAPACITOR
	C917	QETC1HM-475ZN	E.CAPACITOR
	C919	QETC1HM-475ZN	E.CAPACITOR
	C921	QETC1HM-105ZN	E.CAPACITOR
	C922	QETC1AM-107ZN	E.CAPACITOR
	C923	QFP82AJ-103	P.P.CAPACITOR
	C924	QFN31HJ-332Z	M.CAPACITOR
	C925	QFN31HJ-152Z	M.CAPACITOR
	C926	QETC1EM-106ZN	E.CAPACITOR
	C931	QETC1EM-106ZN	E.CAPACITOR
	C932	QETC1EM-106ZN	E.CAPACITOR
	C933	QETC1CM-476ZN	E.CAPACITOR
	C939	QETB1CM-477N	E CAPACITOR
	C942	QETB1CM-477N	E CAPACITOR
	C946	QETC1AM-107ZN	E.CAPACITOR
⚠	D901	1SR35-100	SI DIODE
⚠	D902	1SR35-100	SI DIODE
⚠	D903	1SR35-100	SI DIODE
⚠	D904	1SR35-100	SI DIODE
	D906	MTZ6.2CT-77	Z.DIODE
	D907	HSS104TJ	SI DIODE
	D909	MTZ6.2CT-77	Z.DIODE
	D910	HSS104TJ	SI DIODE
	D911	HSS104TJ	SI DIODE
	D912	HSS104TJ	SI DIODE
	D921	SLB-55VR3F	LED (E.F.G.H)
	D922	SLB-55DU3F	LED(F.G.H)
	D923	SLB-55DU3F	LED(F.G.H)
	D924	SLB-55DU3F	LED(F.G.H)
	D925	SLB-55VR3F	LED (E.F.G.H)
	D926	SLB-55VR3F	LED (E.F.G.H)
	D927	SLB-55VR3F	LED (E.F.G.H)
	D941	HSS104TJ	SI DIODE
	D942	HSS104TJ	SI DIODE
	D943	HSS104TJ	SI DIODE
	D944	HSS104TJ	SI DIODE
	D945	HSS104TJ	SI DIODE
	D946	HSS104TJ	SI DIODE
	D947	HSS104TJ	SI DIODE
	IC901	UPC1228HA	IC
	IC902	BU4066B	IC
	IC903	UPC1228HA	IC
⚠	IC904	UPC78M12H	I.C.
	IC905	HA12136A	IC
	IC906	BA15218N	IC
	IC907	LB1416S	I.C.
	IC908	BA15218N	IC
	J901	EMN00TV-402A	PIN JACK
	J903	QMC9014-008	DIN SOCKET
	L101	VQZ0034-002	MPX FILTER
	L102	VQP0001-562S	INDUCTOR
	L103	VQP0001-183S	INDUCTOR
	L201	VQZ0034-002	MPX FILTER

⚠	REF.	PARTS NO.	PARTS NAME
	L202	VQP0001-562S	INDUCTOR
	L203	VQP0001-183S	INDUCTOR
	L901	VQH1008-015	OSC COIL(BIAS)
	L905	V03047-6T	COIL
	Q101	2SC1685(R,S)	TRANSISTOR
	Q102	2SC1685(R,S)	TRANSISTOR
	Q106	2SC1685(R,S)	TRANSISTOR
	Q107	2SC1685(R,S)	TRANSISTOR
	Q111	2SC2001(L,K)	TRANSISTOR
	Q112	2SC1685(R,S)	TRANSISTOR
	Q116	2SC2001(L,K)	TRANSISTOR
	Q117	2SC1685(R,S)	TRANSISTOR
	Q121	2SC1685(R,S)	TRANSISTOR
	Q201	2SC1685(R,S)	TRANSISTOR
	Q202	2SC1685(R,S)	TRANSISTOR
	Q206	2SC1685(R,S)	TRANSISTOR
	Q207	2SC1685(R,S)	TRANSISTOR
	Q211	2SC2001(L,K)	TRANSISTOR
	Q212	2SC1685(R,S)	TRANSISTOR
	Q216	2SC2001(L,K)	TRANSISTOR
	Q217	2SC1685(R,S)	TRANSISTOR
	Q221	2SC1685(R,S)	TRANSISTOR
	Q901	2SA564(R,S)	TRANSISTOR
	Q902	2SC1685(R,S)	TRANSISTOR
	Q903	2SA564(R,S)	TRANSISTOR
	Q906	2SC1318(R,S)	TRANSISTOR
	Q911	2SA564(R,S)	TRANSISTOR
	Q912	2SC1685(R,S)	TRANSISTOR
	Q913	2SC1685(R,S)	TRANSISTOR
	Q914	2SC1685(R,S)	TRANSISTOR
	R101	QRD161J-684Y	CARBON RESISTOR
	R102	QRD161J-684Y	CARBON RESISTOR
	R103	QRD161J-820Y	CARBON RESISTOR
	R104	QRD161J-392Y	CARBON RESISTOR
	R105	QRD161J-222Y	CARBON RESISTOR
	R106	QRD161J-332Y	CARBON RESISTOR
	R107	QRD161J-332Y	CARBON RESISTOR
	R108	QRD161J-472Y	CARBON RESISTOR
	R109	QRD161J-102Y	CARBON RESISTOR
	R110	QRD161J-472Y	CARBON RESISTOR
	R111	QRD161J-102Y	CARBON RESISTOR
	R112	QRD161J-105Y	CARBON RESISTOR
	R113	QRD161J-105Y	CARBON RESISTOR
	R116	QRD161J-684Y	CARBON RESISTOR
	R117	QRD161J-684Y	CARBON RESISTOR
	R118	QRD161J-820Y	CARBON RESISTOR
	R119	QRD161J-512Y	CARBON RESISTOR
	R120	QRD161J-682Y	CARBON RESISTOR
	R121	QRD161J-102Y	CARBON RESISTOR
	R122	QRD161J-472Y	CARBON RESISTOR
	R123	QRD161J-472Y	CARBON RESISTOR
	R124	QRD161J-102Y	CARBON RESISTOR
	R125	QRD161J-103Y	CARBON RESISTOR
	R126	QRD161J-104Y	CARBON RESISTOR
	R131	QRD161J-393Y	CARBON RESISTOR
	R132	QRD161J-222Y	CARBON RESISTOR
	R133	QRD161J-472Y	CARBON RESISTOR
	R134	QRD161J-472Y	CARBON RESISTOR
	R136	QRD161J-222Y	CARBON RESISTOR
	R139	QRD161J-473Y	CARBON RESISTOR
	R140	QRD161J-222Y	CARBON RESISTOR
	R141	QRD161J-472Y	CARBON RESISTOR
	R142	QRD161J-103Y	CARBON RESISTOR
	R143	QRD161J-472Y	CARBON RESISTOR
	R144	QRD161J-223Y	CARBON RESISTOR
	R151	QRD161J-103Y	CARBON RESISTOR
	R152	QRD161J-472Y	CARBON RESISTOR
	R153	QRD161J-122Y	CARBON RESISTOR
	R154	QRD161J-473Y	CARBON RESISTOR
	R155	QRD161J-123Y	CARBON RESISTOR
	R156	QRD161J-472Y	CARBON RESISTOR
	R157	QRD161J-153Y	CARBON RESISTOR
	R158	QRD161J-152Y	CARBON RESISTOR
	R159	QRD161J-151Y	CARBON RESISTOR
	R160	QRD161J-221Y	CARBON RESISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	R161	QRD161J-105Y	CARBON RESISTOR
	R162	QRD161J-183Y	CARBON RESISTOR
	R163	QRD161J-222Y	CARBON RESISTOR
	R164	QRD161J-222Y	CARBON RESISTOR
	R165	QRD161J-103Y	CARBON RESISTOR
	R166	QRD161J-272Y	CARBON RESISTOR
	R169	QRD161J-152Y	CARBON RESISTOR
	R171	QRD161J-222Y	CARBON RESISTOR
	R181	QRD161J-223Y	CARBON RESISTOR
	R182	QRD161J-103Y	CARBON RESISTOR
	R186	QRD161J-683Y	CARBON RESISTOR
	R187	QRD161J-563Y	CARBON RESISTOR
	R188	QRD161J-223Y	CARBON RESISTOR
	R189	QRD161J-105Y	CARBON RESISTOR
	R190	QRD161J-224Y	CARBON RESISTOR
	R191	QRD161J-102Y	CARBON RESISTOR
	R192	QRD161J-222Y	CARBON RESISTOR
	R201	QRD161J-684Y	CARBON RESISTOR
	R202	QRD161J-684Y	CARBON RESISTOR
	R203	QRD161J-820Y	CARBON RESISTOR
	R204	QRD161J-392Y	CARBON RESISTOR
	R205	QRD161J-222Y	CARBON RESISTOR
	R206	QRD161J-332Y	CARBON RESISTOR
	R207	QRD161J-332Y	CARBON RESISTOR
	R208	QRD161J-472Y	CARBON RESISTOR
	R209	QRD161J-102Y	CARBON RESISTOR
	R210	QRD161J-472Y	CARBON RESISTOR
	R211	QRD161J-102Y	CARBON RESISTOR
	R212	QRD161J-105Y	CARBON RESISTOR
	R213	QRD161J-105Y	CARBON RESISTOR
	R216	QRD161J-684Y	CARBON RESISTOR
	R217	QRD161J-684Y	CARBON RESISTOR
	R218	QRD161J-820Y	CARBON RESISTOR
	R219	QRD161J-512Y	CARBON RESISTOR
	R220	QRD161J-682Y	CARBON RESISTOR
	R221	QRD161J-102Y	CARBON RESISTOR
	R222	QRD161J-472Y	CARBON RESISTOR
	R223	QRD161J-472Y	CARBON RESISTOR
	R224	QRD161J-102Y	CARBON RESISTOR
	R225	QRD161J-103Y	CARBON RESISTOR
	R226	QRD161J-104Y	CARBON RESISTOR
	R231	QRD161J-393Y	CARBON RESISTOR
	R232	QRD161J-222Y	CARBON RESISTOR
	R233	QRD161J-472Y	CARBON RESISTOR
	R234	QRD161J-472Y	CARBON RESISTOR
	R236	QRD161J-222Y	CARBON RESISTOR
	R239	QRD161J-473Y	CARBON RESISTOR
	R240	QRD161J-222Y	CARBON RESISTOR
	R241	QRD161J-472Y	CARBON RESISTOR
	R242	QRD161J-103Y	CARBON RESISTOR
	R243	QRD161J-472Y	CARBON RESISTOR
	R244	QRD161J-223Y	CARBON RESISTOR
	R251	QRD161J-103Y	CARBON RESISTOR
	R252	QRD161J-472Y	CARBON RESISTOR
	R253	QRD161J-122Y	CARBON RESISTOR
	R254	QRD161J-473Y	CARBON RESISTOR
	R255	QRD161J-123Y	CARBON RESISTOR
	R256	QRD161J-472Y	CARBON RESISTOR
	R257	QRD161J-153Y	CARBON RESISTOR
	R258	QRD161J-152Y	CARBON RESISTOR
	R259	QRD161J-151Y	CARBON RESISTOR
	R260	QRD161J-221Y	CARBON RESISTOR
	R261	QRD161J-105Y	CARBON RESISTOR
	R262	QRD161J-183Y	CARBON RESISTOR
	R263	QRD161J-222Y	CARBON RESISTOR
	R264	QRD161J-222Y	CARBON RESISTOR
	R265	QRD161J-103Y	CARBON RESISTOR
	R266	QRD161J-272Y	CARBON RESISTOR
	R269	QRD161J-152Y	CARBON RESISTOR
	R271	QRD161J-222Y	CARBON RESISTOR
	R281	QRD161J-223Y	CARBON RESISTOR
	R282	QRD161J-103Y	CARBON RESISTOR
	R286	QRD161J-683Y	CARBON RESISTOR
	R287	QRD161J-563Y	CARBON RESISTOR
	R288	QRD161J-223Y	CARBON RESISTOR

■ Power Transformer Board : TD-W103U

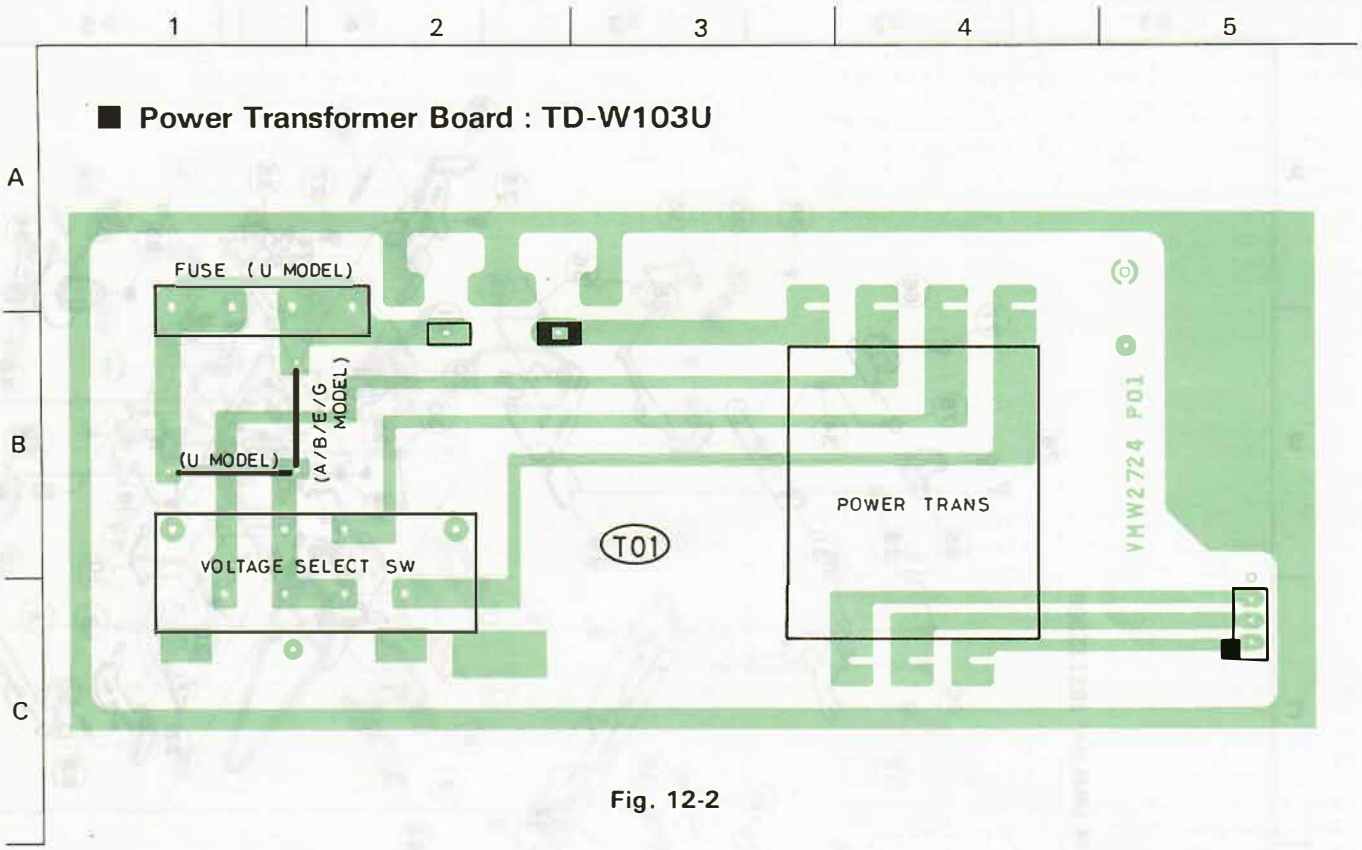


Fig. 12-2

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME
	S01	QSS2325-113	SLIDE SWITCH

13 Exploded View of Mechanism Component Par

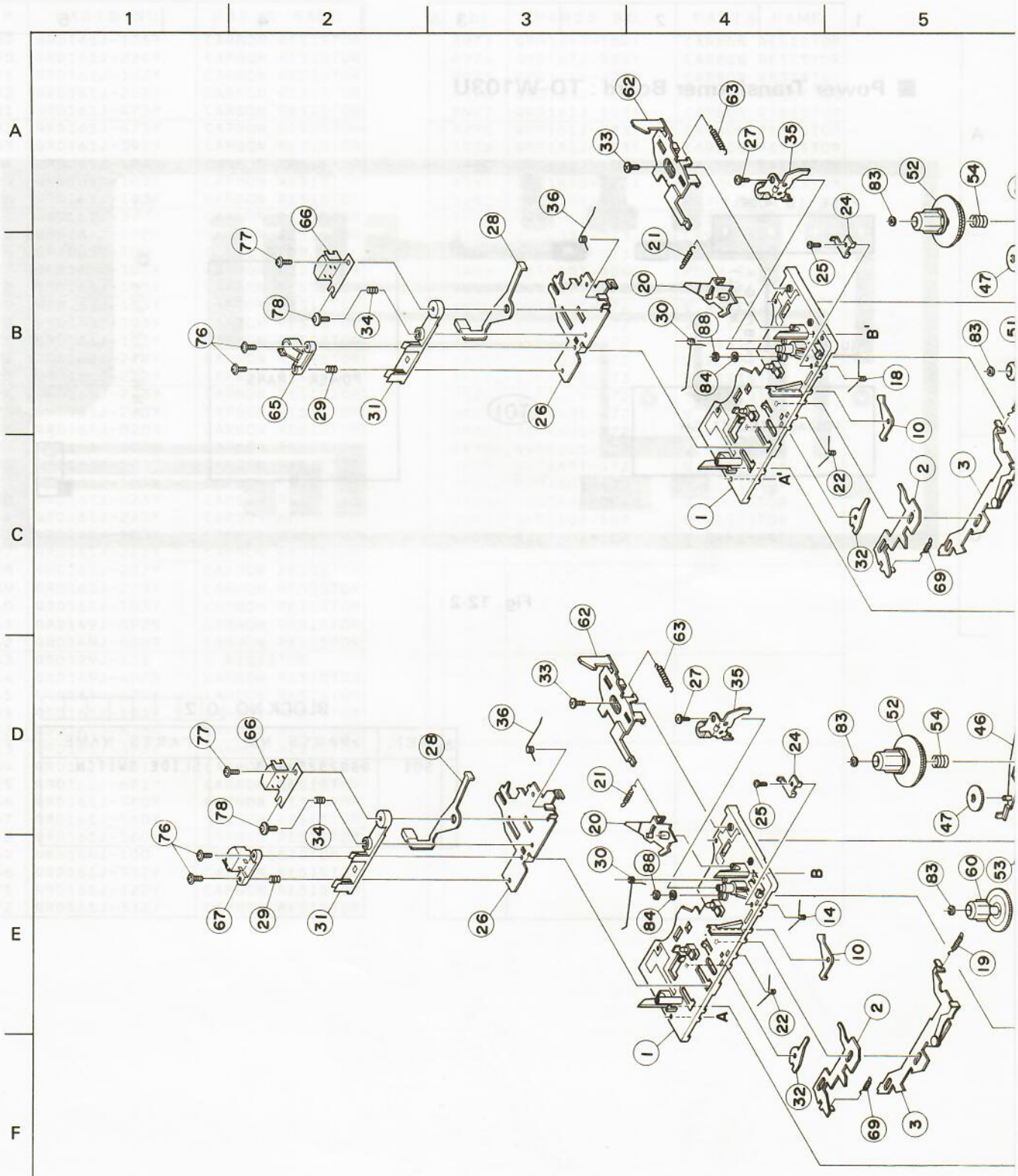
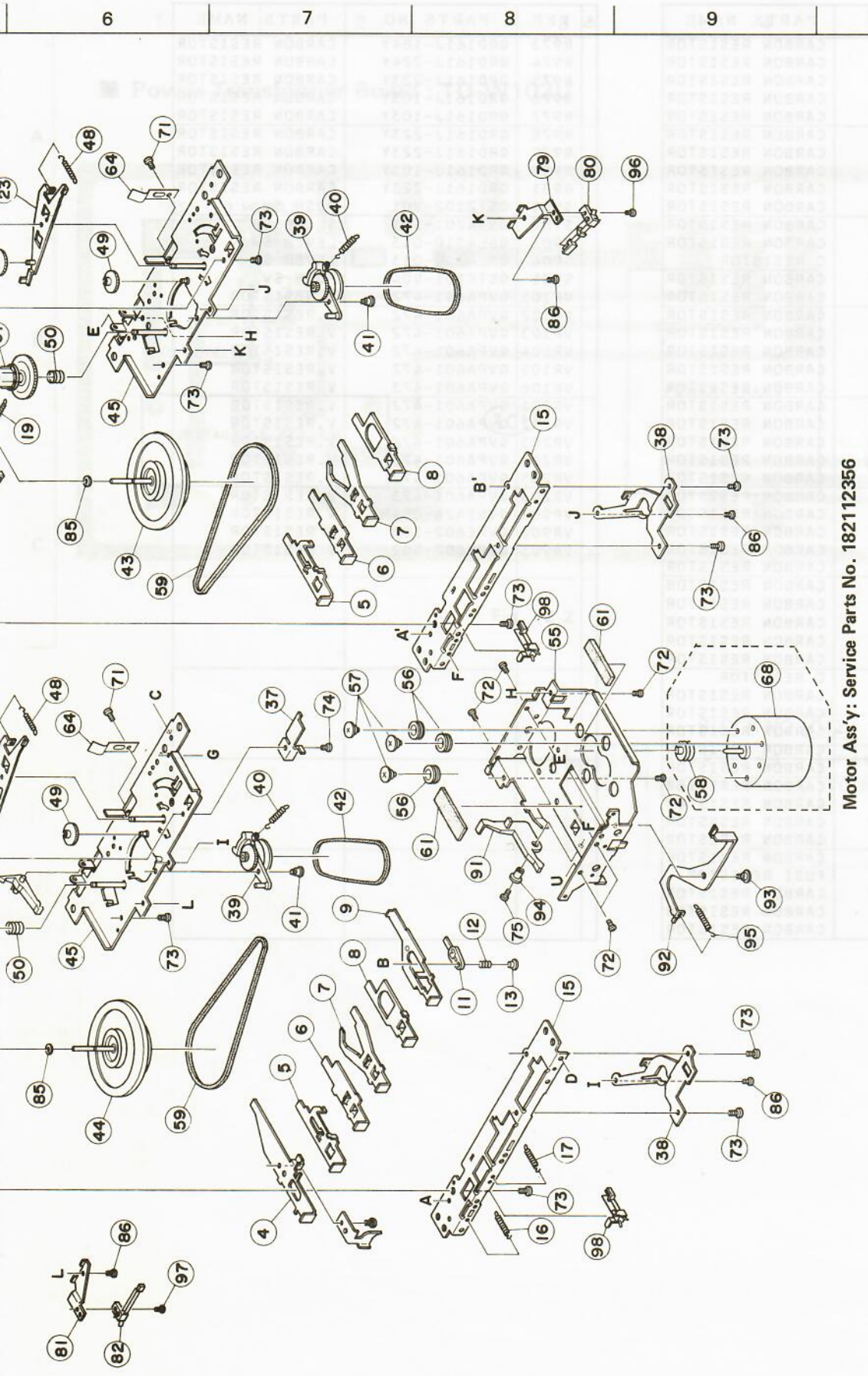


Fig. 13-1

ts and Parts List



⚠	REF.	PARTS NO.	PARTS NAME
	R289	QRD161J-105Y	CARBON RESISTOR
	R290	QRD161J-224Y	CARBON RESISTOR
	R291	QRD161J-102Y	CARBON RESISTOR
	R292	QRD161J-222Y	CARBON RESISTOR
	R901	QRD161J-473Y	CARBON RESISTOR
	R902	QRD161J-473Y	CARBON RESISTOR
	R903	QRD161J-392Y	CARBON RESISTOR
	R904	QRD161J-103Y	CARBON RESISTOR
	R905	QRD161J-103Y	CARBON RESISTOR
	R906	QRD161J-103Y	CARBON RESISTOR
	R911	QRD161J-392Y	CARBON RESISTOR
	R912	QRD161J-392Y	CARBON RESISTOR
	R916	QRZ0052-100	C RESISTOR
	R917	QRD161J-103Y	CARBON RESISTOR
	R918	QRD161J-103Y	CARBON RESISTOR
	R919	QRD161J-183Y	CARBON RESISTOR
	R920	QRD161J-103Y	CARBON RESISTOR
	R921	QRD161J-103Y	CARBON RESISTOR
	R922	QRD161J-222Y	CARBON RESISTOR
	R923	QRD161J-222Y	CARBON RESISTOR
	R924	QRD161J-223Y	CARBON RESISTOR
	R925	QRD161J-223Y	CARBON RESISTOR
	R926	QRD161J-820Y	CARBON RESISTOR
	R927	QRD161J-103Y	CARBON RESISTOR
	R928	QRD161J-103Y	CARBON RESISTOR
	R929	QRD161J-103Y	CARBON RESISTOR
	R930	QRD161J-223Y	CARBON RESISTOR
	R931	QRD161J-223Y	CARBON RESISTOR
	R933	QRD161J-103Y	CARBON RESISTOR
	R937	QRD161J-222Y	CARBON RESISTOR
	R938	QRD161J-222Y	CARBON RESISTOR
	R939	QRD161J-223Y	CARBON RESISTOR
	R940	QRD161J-103Y	CARBON RESISTOR
⚠	R941	QRD149J-8R2S	CARBON RESISTOR
⚠	R942	QRD149J-680S	CARBON RESISTOR
⚠	R943	QRD129J-121	C RESISTOR
⚠	R944	QRD149J-4R7S	CARBON RESISTOR
	R945	QRD161J-682Y	CARBON RESISTOR
	R951	QRD161J-103Y	CARBON RESISTOR
	R952	QRD161J-823Y	CARBON RESISTOR
	R953	QRD161J-393Y	CARBON RESISTOR
	R954	QRD161J-681Y	CARBON RESISTOR
	R955	QRD161J-681Y	CARBON RESISTOR
	R956	QRD161J-560Y	CARBON RESISTOR
	R957	QRD161J-560Y	CARBON RESISTOR
	R958	QRD161J-560Y	CARBON RESISTOR
	R962	QRH144J-100	FUSI RESISTOR
	R966	QRD161J-332Y	CARBON RESISTOR
	R971	QRD161J-122Y	CARBON RESISTOR
	R972	QRD161J-332Y	CARBON RESISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	R973	QRD161J-184Y	CARBON RESISTOR
	R974	QRD161J-224Y	CARBON RESISTOR
	R975	QRD161J-223Y	CARBON RESISTOR
	R976	QRD161J-103Y	CARBON RESISTOR
	R977	QRD161J-103Y	CARBON RESISTOR
	R978	QRD161J-223Y	CARBON RESISTOR
	R979	QRD161J-223Y	CARBON RESISTOR
	R980	QRD161J-103Y	CARBON RESISTOR
	R981	QRD161J-223Y	CARBON RESISTOR
	S901	QST2102-V01	PUSH SW
	S902	QSS4201-551	SLIDE SW
	S903	QSL4310-013	LEVER SW
	S904	QSL4310-013	LEVER SW
	S905	QSTK101-V04	PUSH SW
	VR101	QVPA601-472	V.RESISTOR
	VR102	QVPA601-472	V.RESISTOR
	VR103	QVPA601-472	V.RESISTOR
	VR104	QVPA601-472	V.RESISTOR
	VR105	QVPA601-472	V.RESISTOR
	VR106	QVPA601-473	V RESISTOR
	VR201	QVPA601-472	V.RESISTOR
	VR202	QVPA601-472	V.RESISTOR
	VR203	QVPA601-472	V.RESISTOR
	VR204	QVPA601-472	V.RESISTOR
	VR205	QVPA601-472	V.RESISTOR
	VR206	QVPA601-473	V RESISTOR
	VR901	QVN5A2A-054M	V.RESISTOR
	VR902	QVPE602-502	V RESISTOR
	VR903	QVPE602-502	V RESISTOR

■ Mechanism Component Parts List

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	58, 68	**182112356**	**MOTOR ASS'Y**	**SERVICE PARTS**	**1**
	1	18210160YT	BASE		2
	2	182101176T	SW.LOCK PLATE		2
	3	182101507T	PUSH BUT.ACT.AS	OLD NO. 1821015072T	2
	4	18210128AT	BUTTON LEVER		1
	5	18210129T	PLAY B.LEVER	OLD NO. 18210129BT	2
	6	18210130T	BUTTON LEVER		2
	7	18210131T	BUTTON LEVER		2
	8	18210132T	BUTTON LEVER		2
	9	182101511T	PUS.BUT.LEV.ASY	OLD NO. 1821015112T	1
	10	18210168T	REW.LEVER		2
	11	182101131T	PAUSE LEVER	DECK B	1
	12	18210116T	LEVER SPRING	DECK B	1
	13	18210134T	PAUSE STOPPER	DECK B	1
	14	18210123T	SPRING	DECK B	1
	15	18210119T	SUB CHASSIS		2
	16	18210107T	B. LEVER SPRING	DECK B	1
	17	18210150T	SPRING	DECK B	1
	18	18210187T	SPRING	DECK A	1
	19	18210122T	SPRING		2
	20	18210162T	AUTO LEVER		2
	21	18210121T	SPRING		2
	22	18210113T	SPRING		2
	23	182110512T	T-UP G.PLATE AS		2
	24	182101170T	DETECT BRACKET		2
	25	99991803T	SPECIAL SCREW		2
	26	18290304T	HEAD PANEL		2
	27	18213912T	MS SCREW		2
	28	182103301T	SENS. PLATE ASY	OLD NO. 1821033012T	2
	29	18210308T	SPRING		2
	30	18210318T	SPRING		2
	31	18290302T	HEAD BASE		2
	32	18290110T	PR STOPPER		2
	33	18211305T	PME SCREW		2
	34	18210307T	AZIMUTH SPRING		2
	35	182104302T	P.ROLL.ARM ASY.		2
	36	18210412T	PINCH ROLL.SP.		2
	37	18211276T	P.P.BRACKET		1
	38	18213919T	METAL GUIDE		2
	39	182107337T	RF PULY.ARM ASY		2
	40	18210704T	SPRING		2
	41	18210721T	COLLAR SCREW		2
	42	18210703T	RF.BELT		2
	43	18210933T	FLYWHEEL ASS'Y		1
	44	18210932T	FLYWHEEL ASS'Y		1
	45	182110515T	REEL BASE ASS'Y		2
	46	182110528T	T-UP G.PLATE AS		1
	47	18211034T	T.ROLL.GEAR		2
	48	18211008T	SPRING		2
	49	18211070T	F.FORWARD GEAR		2
	50	18211042T	SPRING		2
	51	182110309T	SUPPLY REEL ASY		1
	52	182110330T	T-UP REEL ASS'Y		2
	53	18211069T	REC.SAF.LEVER		1
	54	18211046T	SPRING		2
	55	18211259T	MOTOR BRACKET		1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	56	18211266T	M. RUBBER		3
	57	18511418T	M. C. SCREW		3
	58	182112184T	MOTOR PULLEY		1
	59	18211204T	MAIN BELT	OLD NO. 182110309ZT	2
	60	182110332T	SUPPLY REEL ASY		1
	61	182112126T	ANTI V.FELT MAT		1
		182112126T	ANTI V.FELT MAT		1
	62	18211304T	E.SLIDE LEVER		2
	63	18211302T	SPRING		2
	64	18291001T	PACK SPRING		2
	65	18210328T	DUMMY HEAD		1
	66	62040150T	R/P HEAD		1
		62040150T	R/P HEAD		1
	67	62011403T	E HEAD		1
	68	60030341T	MOTOR		1
	69	18210138T	SPRING		2
	71	91790000T	TAPPING SCREW		2
	72	91800000T	TH.TAP.SCREW		6
	73	96790000T	TAPPING SCREW		9
	74	96740000T	TAPPING SCREW		1
	76	98210000T	SPECIAL SCREW		4
	77	98200000T	CAP SCREW		2
	78	99220000T	SCREW(M2 X 7)		2
	79	18213524T	P SW. BRACKET		1
	80	64010170T	LEAF SWITCH		1
	81	182112155T	SW. BRACKET		1
	82	640101103T	LEAF SWITCH		1
	83	99990307T	P WASHER		4
	84	99320000T	P WASHER CUT		2
	85	99990004T	POLY.WASHER		2
	86	91810000T	SCREW		4
	88	94970000T	E.RING		2
	91	18211215T	P.KICK LEVER		1
	92	18211268T	P.KICK LEVER		1
	93	18211223T	COLLAR SCREW		1
	94	18211265T	COLLAR		1
	95	18211225T	SPRING		1
	96	90030000T	SCREW		1
	97	97590000T	MINI SCREW		1
	98	64050123T	LEAF SWITCH		2

14 Exploded View of Enclosure Component Parts

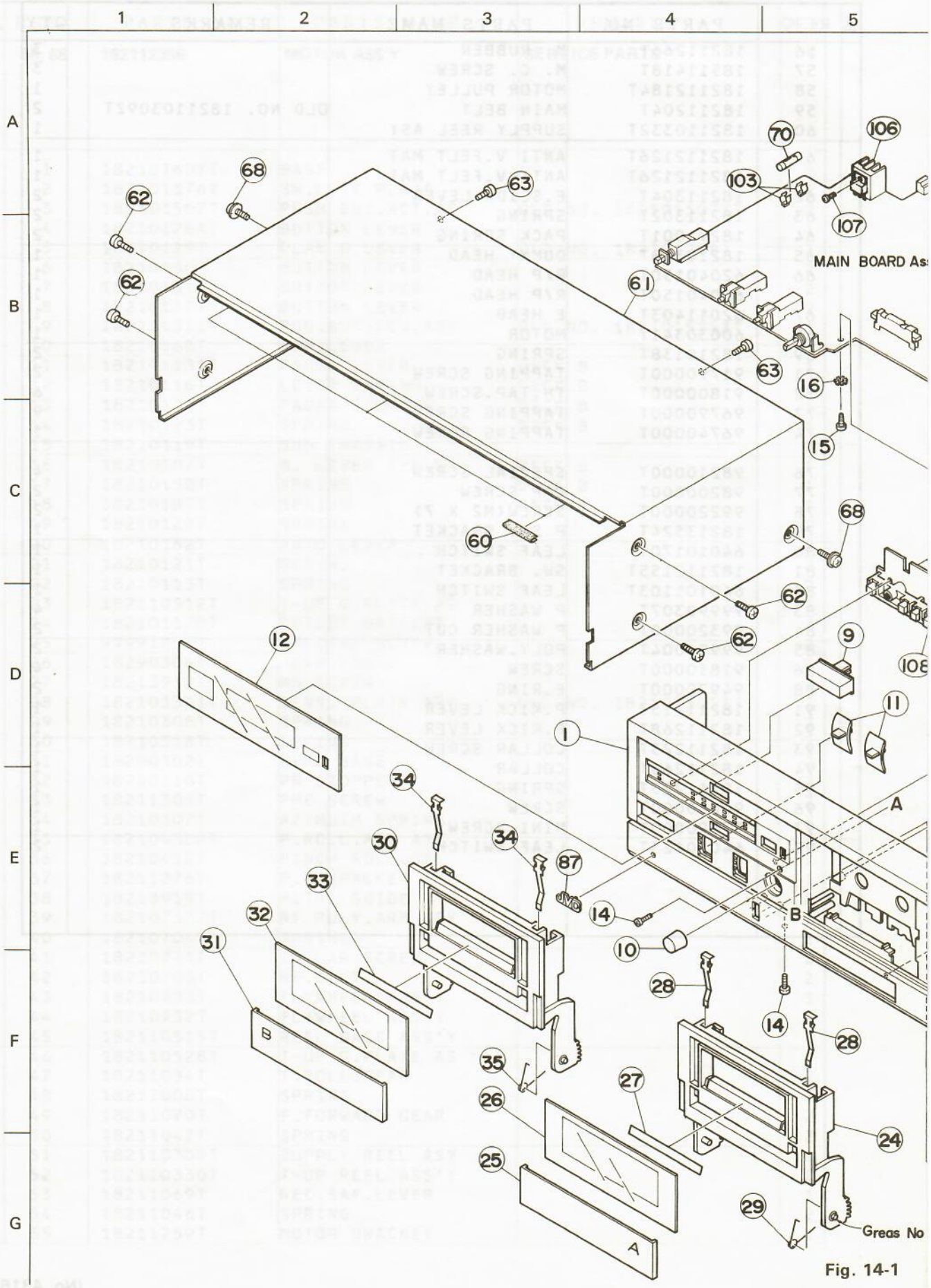
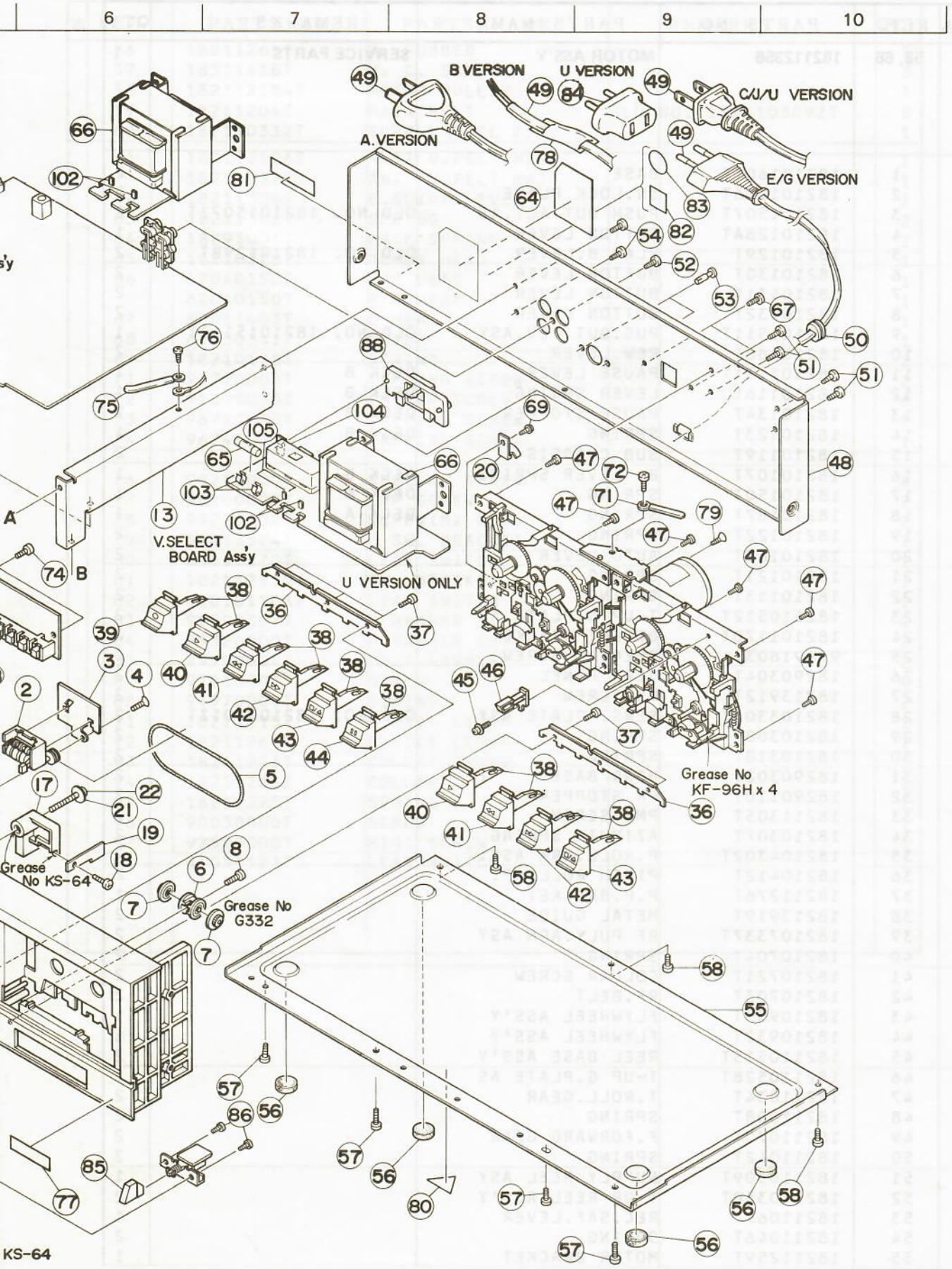


Fig. 14-1

and Parts List



■ Enclosure Component Parts List

BLOCK NO. [M][2][M][M]

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
		ZCTDW103K-CH-A	**CASSETTE HOLDER ASS'Y**	**TD-W103 C/J } SERVICE**	**1**
		ZCTDW103K-CH-B	**CASSETTE HOLDER ASS'Y**	**OTHER AREA } PARTS**	**1**
	1	VJC1534-014	FRONT PANEL	A/B/E/G/U	1
		VJC1534-015UL	FRONT PANEL	J/C VERSION	1
	2	VKC5190-001T	TAPE COUNTER		1
	3	VKL5900-001	COUNTER BRACKET		1
	4	SSSF3010Z	SCREW	COUNTER BRAKET	1
	5	VKB3000-101	BELT	COUNTER	1
	6	VYH5896-001	DAMP HOLDER		1
	7	VYH5601-001	GEAR	GREASE G-332	2
	8	SDSF3010Z	SCREW	FOR DAMPER	1
	9	E72789-001	PUSH KNOB	FOR POWER	1
	10	VXL4255-001	VOLUME KNOB	INPUT LEVEL	1
	11	VXQ4074-002	LEVER KNOB	NR/B TAPE SELECT	2
	12	VJK3348-005	LENS		1
	13	VKL3804-001	CENTER CHASSIS		1
	14	SDST3008Z	SCREW	FOR C.CHASSIS	2
	15	SDST3006Z	SCREW	FOR C.CHASSIS	1
	16	WBS3000N	WASHER	FOR C.CHASSIS	1
	17	VKS3298-001	REC ARM		1
	18	SDSF2606Z	SCREW	FOR ARM-SPRING	1
	19	VKY4498-001	SPRING		1
	20	VKL6042-001	REC BRACKET		1
	21	QQ3091-109	WASHER	FOR ARM	1
	22	SBSF3030Z	SCREW	FOR ARM-F.PANEL	1
	24	VJT2245-001	CASS HOLDER	DECK:A	1
	25	VJT3299-001	HEAD COVER	DECK:A	1
	26	VJK4367-001	CASS LENS	DECK:A	1
	27	VJD5143-007	HOLDER PLATE	DECK:A	1
	28	VKY4180-002	CASSETTE SPRING	DECK:A	2
	29	VKW4612-001	SPRING	DECK:A	1
	30	VJT2245-002	CASSETTE HOLDER	DECK:B	1
	31	VJT3299-002	HEAD COVER	DECK:B	1
	32	VJK4367-001	CASS LENS	DECK:B	1
	33	VJD5143-007	HOLDER PLATE	DECK:B	1
	34	VKY4180-002	CASSETTE SPRING	DECK:B	2
	35	VKW4612-001	SPRING	DECK:B	1
	36	VKL5960-001	BUTTON BRACKET		2
	37	SDSF2608Z	SCREW	FOR BUTTON BRACKE	6
	38	VKS4843-002	BUTTON LEVER		10
	39	VXP3167-001	MECHA BUTTON	FOR REC	1
	40	VXP3167-002	MECHA BUTTON	FOR PLAY	2
	41	VXP3167-003	MECHA BUTTON	FOR REW	2
	42	VXP3167-004	MECHA BUTTON	FOR FF	2
	43	VXP3167-005	MECHA BUTTON	FOR STOP/EJECT	2
	44	VXP3167-006	MECHA BUTTON	FOR PAUSE	2
	45	96610000T	TH.TAP.SCREW	FOR LEAF SWITCH	1
	46	640101125T	LEAF SW		1
	47	SDSF3010Z	SCREW		6
	48	VJC2369-009	REAR PANEL	A/B/C/E/J	1
		VJC2369-010	REAR PANEL	G VERSION	1
		VJC2369-003	REAR PANEL	TD-W103U	1
⚠	49	QMP1200-200	POWER CORD	TD-W103C/J	1
⚠		QMP2560-200	POWER CORD	TD-W103A	1
⚠		QMP3900-200	POWER CORD	TD-W103E/G	1
⚠		QMP9017-008BS	POWER CORD	TD-W103B	1
⚠		QMP7380-200	POWER CORD	TD-W103U	1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
⚠	50	QHS3876-162	S.R.BUSHING	A/C/E/G/J/U	1
⚠		QHS3876-162BS	S.R.BUSHING	B VERSION	1
	51	SDST3008M	SCREW	FOR POWER TRANS.	4
	52	SDSF3008M	SCREW	FOR JACK	1
	53	E48729-002	PLASTIC RIVET	TD-W103G	2
	54	SDST3008M	SCREW	R C.CHASSIS-REAR	2
	55	VJC2259-003	BOTTOM COVER		1
	56	VJF4003-005	FOOT		4
	57	SDSF3010Z	SCREW	BOTTOM (FRONT)	4
	58	SDST3006Z	SCREW	BOTTOM (REAR)	3
	60	VYSA1R6-039	SPACER	FOR P.C.BOARD	2
	61	VJC2260-005	TOP COVER		1
	62	SDSB4010M	SCREW	FOR TOP COVER	4
	63	SDST3006M	SCREW	FOR TOP COVER	2
	64	VYN2261-002PA	NAME PLATE	TD-W103B	1
		VYN2261-003PA	NAME PLATE	TD-W103A	1
		VYN2261-005PA	NAME PLATE	TD-W103E	1
		VYN2261-006PA	NAME PLATE	TD-W103J	1
⚠	65	QMF51A2-R25	FUSE	F902 TD-W103U	1
⚠	66	VTP52A2-022F	POWER TRANS	TD-W103C/J T901	1
⚠		VTP52G2-021FN	POWER TRANS	TD-W103U T901	1
⚠		VTP52M2-021FBS	P.TRANSFORMER	TD-W103B T901	1
⚠		VTP52M2-021FN	P.TRANSFORMER	TD-W103A/E/G T901	1
	67	SDSF3008M	SCREW	V.SELECT U VERSIO	2
	68	VKZ3001-004	SPECIAL SCREW	FOR TOP COVER	2
	69	LPSP2004Z	SCREW	FOR BRACKET	1
⚠	70	QMF51A2-R80	FUSE	F901 A/E/G/U	1
⚠		QMF51E2-R80BS	FUSE	F901 B VERSION	1
	71	VKZ4001-111	WIRE HOLDER		1
	72	SDST2604Z	SCREW		1
	74	SDSF3010Z	SCREW		2
	75	VKZ4001-110	WIRE CLAMP		1
	76	SDST3006Z	SCREW		1
	77	TJL000420-01	CAUTION LABEL	TD-W103B	1
	78	QZL1002-003	WARNING LABEL	TD-W103B	1
	79	SDSF3010Z	SCREW	FOR MECHA.ASS'Y	1
	80	VND4113-001	G.CAUTION LABEL	TD-W103B/J	1
	81	VND4205-004	CAUTION LABEL	TD-W103B	1
	82	VND4037-002	F MARK	TD-W103G	1
	83	T44362-001	CSA LABEL		1
	84	V04062-001	CONTI.PLUG	TD-W103U	1
	85	VXP4704-001	PUSH KNOB		1
	86	SBSF2606Z	SCREW		2
	87	E72968-001	JVC MARK		1
	88	VKS5011-001	VOLTAGE CONTACT	TD-W103U	1
	102	VMZ0034-002	TAB		2
	103	VMZ0043-001S	FUSE CLAMP		2
	104	QSS2325-113	SLIDE SWITCH	S01	1
	105	VMC0107-003	CONNECTOR		1
	106	VMH4015-H25B	HEAT SINK		1
	107	LPSP3008Z	SCREW		1
	108	VJD3601-001	LED HOLDER		1

15 Packing Illustration and Parts List

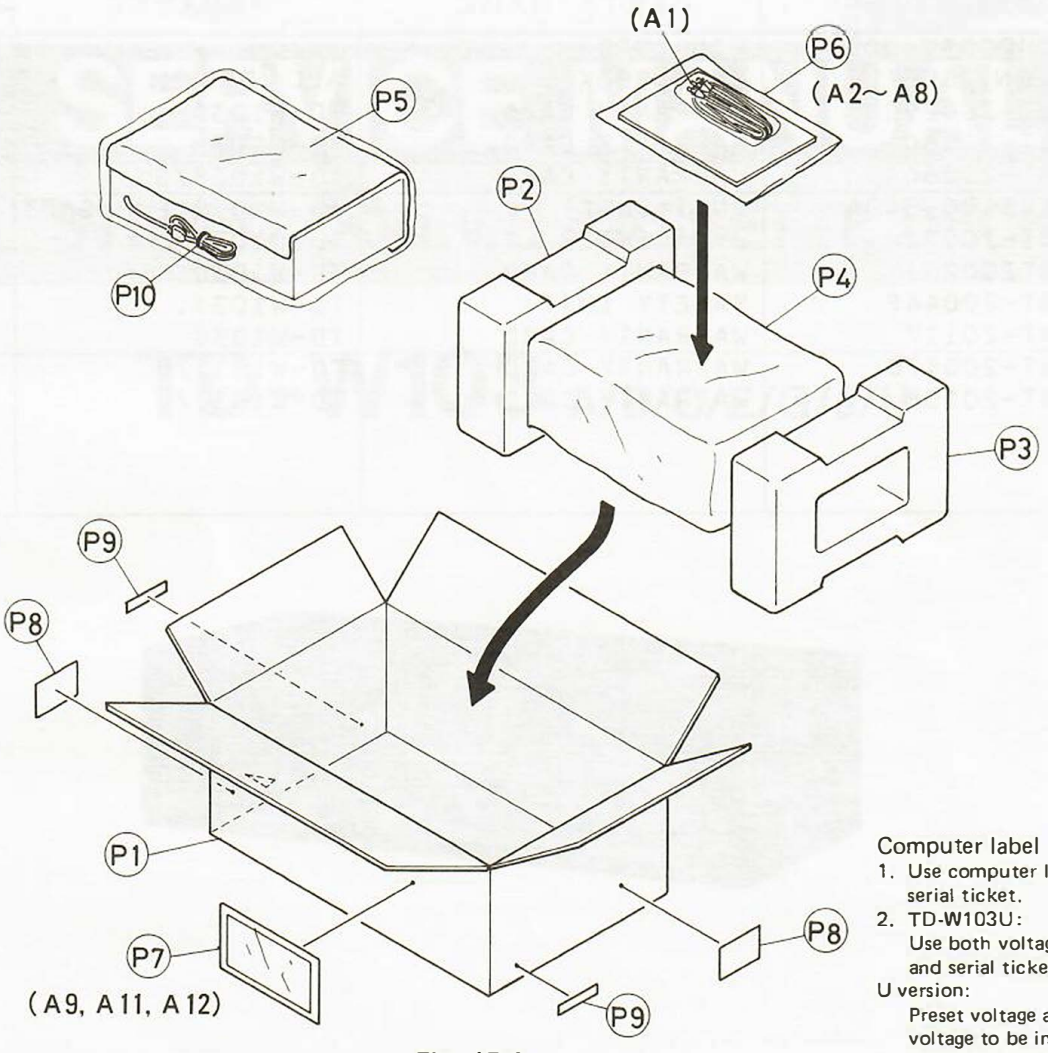


Fig. 15-1

Computer label
1. Use computer label for serial ticket.
2. TD-W103U:
   Use both voltage label and serial ticket.

U version:
Preset voltage and usable voltage to be indicated on computer label.

■ Packing Parts List

BLOCK NO. M3MM

△	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	P1	VPC2261-M001	Carton		1
	P2	VPH2277-001	Cushion (L)		1
	P3	VPH2278-002	Cushion (R)		1
	P4	VPE3005-026	Poly Bag		1
	P5	VPK4002-006	Sheet		1
	P6	VPE3005-007	Poly Bag		1
	P7	EE66416-003	Envelope	TD-W103J/U	1
	P8	VND4909-001	Voltage Label	TD-W103U	1
	P8	—	Computer Label		2
	P9	VND3044-001	Serial Ticket	TD-W103A/U: White	1
	P9	VND3044-002	Serial Ticket	TD-W103J: Orange	2
	P9	VND3044-003	Serial Ticket	TD-W103E: Blue	1
	P9	VND3044-004	Serial Ticket	TD-W103B: Breen	1
	P9	VND3044-005	Serial Ticket	TD-W103G: Red	1
	P9	VND3044-006	Serial Ticket	TD-W103C: Yellow	1
	P9	VND3069-001	EAN Code Label	TD-W103A/B/E/G/U	2
	P9	VND3065-004	UPC Code Label	TD-W103C/J	2
	P10	Q04141H	Wire Clamp		1

16 Accessories

BLOCK NO. M4MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	A1	VMP0039-00D	PIN CORD		1
	A2	VNN2261-671M	INST.BOOK	ALL VERSION	1
	A3	BT-20029C	WARRANTY CARD	TD-W103A	1
	A4	BT-20060	WARRANTY CARD	TD-W103B	1
	A5	BT-20066A	WARRANTY CARD	TD-W103B/G	1
	A6	E43486-340A	INST.SHEET	TD-W103B:FOR SAFT	1
	A7	BT-20071A	JVC CENTER LIST	TD-W103C	1
	A8	BT20025J	WARRANTY CARD	TD-W103C	1
	A9	BT-20044F	SAFETY INST.	TD-W103J	1
	A10	BT-20117	WARRANTY CARD	TD-W103G	1
	A11	BT-20047D	WARRANTY CARD	TD-W103J/U	1
	A12	BT-20108	WARRANTY CARD	TD-W103J/U	1

JVC
VICTOR COMPANY OF JAPAN, LIMITED.
AUDIO PRODUCTS DIVISION MAEBASHI PLANT 10-1, 1-chome, Ohwatari-cho, Maebashi-city 371, Japan